

REPORT
OF
THE STUDY GROUP ON VIABLE UNITS
APRIL, 1968



GOVERNMENT OF INDIA
MINISTRY OF TRANSPORT & SHIPPING
NEW DELHI

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ROAD TRANSPORT—A STUDY IN RETROSPECT

Importance of Road Transport

1.1. The extent of development of road transport in any country is at once a determinant and indicator of its prosperity. A sound system of road transport neutralises the disadvantages of distances in conveyance of raw materials and labour and accelerates the pace of both production and distribution activities. Though other modes of haulage, like the railways, are suited for bulk hauls, they cannot provide the advantages of road transport in speed, flexibility and door-to-door delivery. By virtue of its ability to penetrate into the remotest parts of the land, at a comparatively very low capital cost, mechanised road transport alone can break through the barriers of isolation and consequent stagnation in under-developed countries.

1.2. This characteristic of road transport as a catalytic agent to the over-all economic development of the country has, however, to be considered in relation to some inherent defects of the industry, one of them being its disorganised state. Though several attempts were made by Government to bring about proper organisation of the road transport industry, they have not yielded the desired results as a study of its growth shows that greater emphasis was laid in the past on rail-road coordination rather than enabling the road transport industry to grow on sound lines.

Growth of Road Transport in the Country

1.3. The role of mechanised road transport in this country started with the commencement of the present century, the first motor vehicle having been imported into India in 1898. The number of motor vehicles on road during the early years of the present century was few and their use/operation was governed by the then Provincial enactments which were concerned with registrations only. The (Indian) Motor Vehicles Act, 1914, was the first all-India enactment dealing with control over operation of motor vehicles.

1.4. The phenomenal growth of road transport began in the early 1920's as a result of the diversion of surplus army vehicles to civilian market after World War I. This also led to unhealthy competition and even rate cutting amongst the operators. The Motor Vehicles Act of 1914, had, therefore, to be supplemented in the post-war years by Provincial Acts in order to introduce some measure of regulation and control. In the late 1920's, the problems of unhealthy competition became more acute and the shrinkage of traffic accentuated by the world wide depression (which involved this country also) had brought to the fore the need for regulation of this industry, both internally and in relation to the railways. A study of rail-road coordination was thus initiated by the Mitchell-Kirkness Committee in 1932.

Mitchell-Kirkness Committee Report, 1932

1.5. The Mitchell-Kirkness Committee, commenting upon the state of affairs existing in the road transport industry at that time, observed as under :

"The evils from which the public service motor transport is suffering are largely due to the excessive competition, unemployment amongst buses and their concentration on the more popular routes. . . . We think that the evils attending unlimited competition are now such that the alternative, namely, monopoly would be preferable. . . . In any event, we believe a controlled monopoly will be necessary to encourage enterprise on less popular routes."

The Committee recommended that the number of licences for buses on any route should be restricted and that conditions such as issue of time-tables, publication of schedules of fares and compulsory insurance of motor vehicles should also be prescribed. It felt that these measures would raise the business to better and more economic levels and that fuller regulation and control would eliminate unhealthy competition and make it possible for bus operators to offer better services to the public.

Motor Vehicles Act, 1939

1.6. On the basis of the recommendations of this Committee, and those made by the Wedge Wood Committee* in 1937, the Motor Vehicles Act, 1939, was enacted to ensure the growth of road transport on the basis of healthy competition in the industry itself and with the railways. This Act, which is in force even today, provided for the creation of Regional and Provincial (now State) Transport Authorities, with full powers to grant permits for stage carriages, public carriers and private carriers and also to lay down conditions pertaining to routes, timings, specifications of vehicles, standards of maintenance etc. which were to be attached to the permits and had to be observed by the permit holders.

Post-war Reconstruction Committee Report, 1943

1.7. A decade after the Mitchell-Kirkness Committee had voiced its concern over unhealthy competitive practices amongst bus operators, the Post-war Reconstruction report of the Technical Sub-Committee to the Sub-Committee on Transport on the future of road transport and road-rail relations, 1943, also drew attention to the need for "regular, speedy and comfortable motor service, enforcement of maintenance and other safety measures, prevention of flooding of roads by motor transport concerns resulting in cut-throat competition" and urged that, in order to have "civilized facilities for travel commensurate with the density of the traffic and the service which that traffic can support. . . the conditions requisite must inevitably result in the replacement of the small owner by large Companies". This recommendation was reiterated in 1945 by the Transport Advisory Council and also by the Post-war Policy Committee on Transport. In pursuance of these recommendations, several State Governments used compulsion as well as persuasion to organise individual operators into bigger units.

Post-Independence period

1.8. The post-Independence era also witnessed some efforts on the part of Government to bring about formation of viable units† in the road transport industry. The Planning Commission, in the early fifties, urged the State Governments to encourage the formation of viable units of passenger vehi-

*This Committee was solely concerned with rail-road coordination.

†The term "viable unit" was not precisely defined until 1954.

cles in areas where nationalisation was not proposal to be resorted to. For the first time, the need for formation of viable units amongst goods operators was also stressed by this Commission when they recommended that incentives should be given to viable units of goods vehicles by granting them permits for a period of five years.

1.9. The Planning Commission, in the First Five Year Plan, reiterated the policy of forming larger units of operators and observed that only large organisations, with adequate financial resources, could provide the workshop and other facilities essential for rendering efficient and economic service. According to them, it was desirable for the existing private operators to amalgamate, wherever possible, into big viable units to enable them to achieve better returns and maintain better standards of operation. The Planning Commission, in the Second Five Year Plan, again stated that inadequate development of road transport during recent years could be attributed, amongst other reasons, to the fact that the majority of private operators were small individual owners without resources, who could not extend their operation on sound and business-like lines. In pursuance of the recommendations contained in the Five Year Plans, some State Governments introduced rules in their Motor Vehicles Rules for preferential-treatment to viable units in the matter of grant of permits. A notable example is that of Madhya Pradesh (then Central Provinces and Berar) which introduced a new Rule in their Motor Vehicles Rules as under :

“49-A—Where there are more than one applicant for a stage carriage permit over any route, routes or areas, then, other things being equal, a Regional Transport Authority or the State Transport Authority, as the case may be, shall, in deciding whether to grant or refuse a stage carriage permit, give preference to a Viable Unit.”

“Explanation.—For the purpose of this rule, a Viable Unit means an operator who is in possession of more than 20 public vehicles.”

Following the lead given by Madhya Pradesh, a few other States also introduced provisions in their Motor Vehicles Rules for preference to viable units in the grant of permits. The impact of these provisions, for various reasons in so far as formation of viable units was concerned, was not significant.

Viable Unit—Definition

1.10. On the lines of the above provision in the Central Provinces and Berar Motor Vehicles Rules, the term “viable unit” was defined by the Sub-Committee appointed by the Conference of Transport Commissioners/Controllers in 1957 as one “owning not less than 20 vehicles”. It was explained, however, that the expression “viable unit” referred to a unit of vehicles and not to owners of vehicles and so a Joint Stock Company, Cooperative Society or union of operators, having an effective control over the requisite number of motor vehicles, could come within the ambit of such a unit.

Study Group on Transport Planning

1.11. The Study Group on Transport Planning, 1955, appointed by the Ministry of Transport & Communications observed that “as long as the industry was based on large number of small units, each owning one or two vehicles, the defects (to which they are subjected) would continue”. The

Group added that it was desirable to encourage the formation of viable units each having over 15 vehicles. Summing up the need for formation of such units, the Group observed that every thing possible should be done to encourage the formation of bigger units.

The policy underlined in the First Five Year Plan in regard to organisation of viable units of road transport operators was kept in view in the subsequent Plans too. It may, however, be stated that this policy was linked to nationalisation of passenger transport and envisaged that "in areas to be left entirely to private operators of passenger services, special encouragement should be given in favour of viable units in the matter of grant of route permits".

Masani Committee, 1959

1.12. Of the recent studies made of the question of formation of viable units, reference to the recommendations contained in the report of the Road Transport Reorganisation Committee, 1959 (Masani Committee) will be relevant. The Committee exhorted Government to encourage the formation of efficient road transport enterprises in all reasonable and legitimate ways and suggested the creation of viable units consisting of a minimum of 5 goods vehicles for intra-State operations and 10 goods vehicles for inter-State operations. In regard to passenger transport, the Committee suggested that a unit should consist of a minimum of 5 buses.

Committee on Transport Policy and Coordination

1.13. The Committee on Transport Policy and Coordination, in its final report (1966), also made recommendations for encouragement of viable units in the country. According to the data contained in this report, 89% of road transport operators in this country owned only one vehicle each; this had resulted in a number of disadvantages. The Committee recommended that small operators should be helped to join together to form viable units and have a fleet of 10 or more vehicles in each unit. The Committee also recommended certain concessions in the issue of permits for long distances and other facilities to encourage more units being formed.

Road Transport Taxation Enquiry Committee

1.14. The final report of the Road Transport Taxation Enquiry Committee (1967), appointed under the Chairmanship of Dr. B. V. Keskar, also stressed the need for the formation of viable units and highlighted the defects in the present functioning of the goods transport industry.

Implementation of the Various Recommendations

1.15. As a result of the recommendations made by various Committees, Study Teams and Conferences regarding organisation of road transport industry, the Transport Development Council recommended that the following inducements might be offered to encourage individual operators to form viable units in the country :—

- (i) Preference in the grant of long distance permits for inter-State operation.
- (ii) Special facilities in the collection of taxes on provision of reasonable security.
- (iii) Financial assistance through Government or State Bank or Co-operative Banks.

- (iv) Grant of Actual Users' Import licence specially for obtaining spare parts not readily available.

The State Financial Corporations Act, 1951 was amended with effect from the 1st April, 1962, to make the road and inland water transport industries eligible for financial assistance and guarantee facilities from the State Financial Corporations, like other industries. The limit of accommodation was kept at Rs. 20 lakhs in the case of a co-operative society or a limited company and Rs. 10 lakhs in any other case. Besides these and the steps taken by State Governments to implement the above recommendations, necessary provision was made for grant of actual users' import licence to a co-operative society, if its members, as distinct from the society itself, together owned 25 or more vehicles.

We could not get information about the extent to which the other recommendations enumerated above were implemented.

Growth Statistics

1.16. It will be interesting to record here the growth of motor vehicles over the past several years. During the first decade of this century, the number of motor vehicles rose to 45,000 and, by 1929, there were 1,17,900 vehicles on road. The growth was not, however, very noticeable during the next two decades; the number of vehicles in 1947 was only 1,78,000. After Independence, however, the growth of road transport revived and, by 1965-66, the vehicle population had reached the million mark. The following table illustrates this rapid growth of the industry over the Plan periods :

Year	Buses	Trucks	Total commercial vehicles	Total vehicles (including motor cycles & scooters)
1950-51	34,411	81,888	1,16,299	3,08,000
1955-56	46,461	1,19,097	1,65,558	4,25,000
1960-61	57,049	1,71,045	2,28,094	6,64,000
1965-66*	70,000	2,55,000	3,25,000	10,09,000

*Estimated.

Past approach to problems of Reorganisation of Road Transport Industry

1.17. During the last 50 years, when road transport industry passed through different stages of development, the emphasis had been more on regulation and control of the industry. The question of reorganising the industry was guided by principles of coordination between road passenger services and railways for avoiding wasteful competition. The need for such reorganisation was not, however, felt to the same extent in the case of goods transport as in the case of passenger transport. Even in regard to the latter, only a few State Governments had, in fact, taken measures to accord preferential treatment to units upto five vehicles in the matter of grant of permits. These, however, did not go very far, as along with the desire to reorganise this industry into bigger units, permits were also being issued quite

liberally without regard to the size or number of vehicles owned by an operator. This position continues to exist even today, with the result that the road transport industry is still dominated by small operators.

1.18. There were also other factors which ran counter to Government's desire to reorganise the industry. Their approach to the problem of viable units was given a doctrinaire turn, leading to the inference that Government was trying to oust small operators in preference to large units, resulting in a state of affairs which was incompatible with the principle of socialistic pattern of society. It is unfortunate that such a misapprehension persists in the minds of people even today in this country.

Background relating to appointment of Study Group

1.19. This misapprehension might well be one of the reasons which stood in the way of the States encouraging the formation of larger units. In addition, the provisions of the Income Tax Act and the Motor Transport Workers Act were not such as to encourage the formation of viable units. On the other hand, the organisation of the industry on proper lines had assumed importance in the context of our programme for production of commercial vehicles and development of the road transport system in the Fourth Five Year Plan period. It was felt that, unless effective measures were taken without further delay, it would become increasingly difficult to administer the regulatory provisions of the Motor Vehicles Act, 1939, and also to ensure the provision of economic and dependable services to the public. The Transport Development Council, at its fifth meeting held in July, 1964, gave careful thought to this matter and recommended that the Union Ministry of Transport (& Shipping) should set up a Study Group to make a final and scientific examination of the entire problem of formation of viable transport units.

Appointment of Study Group on Viable Units

1.20. In pursuance of the Transport Development Council's recommendation, the Ministry of Transport (& Shipping) appointed a part-time Study Group on the 27th May, 1965, consisting of the following, to examine the problems involved :—

Chairman

1. Shri S. Mullick, Secretary, Home (Transport) Department, Government of West Bengal, (now Chairman, Calcutta Improvement Trust)

Members

2. Shri Y. S. Kasbekar, Director of Transport, Maharashtra.
3. Shri D. P. Varun, Deputy Transport Commissioner (Administration), Uttar Pradesh. (now Deputy Development Commissioner, Uttar Pradesh)
4. Shri C. Sundaramoorthy, Deputy Transport Commissioner, Madras.
5. Shri Humayun Yar Khan, Transport Commissioner, Andhra Pradesh.
6. Shri R. B. Mathur, Senior Research Officer, Planning Commission, (now Transport Specialist and Member-Secretary, Joint Technical Group for Transport Planning).

7. Shri Kundan Lal, Secretary-General, All India Motor Unions' Congress, New Delhi.
8. Shri T. S. Santhanam, 37 Mount Road, Madras.
9. Shri Manohar Singh Dhody, Singh Transport Company, 275 Reay Road, Bombay-10.

Member-Convenor

10. Shri A. S. Bhatnagar, Deputy Secretary, Ministry of Transport.

Subsequent Changes in Membership

1.21. Sarvashri Humayun Yar Khan and Y. S. Kasbekar were transferred to other assignments and the Governments of Andhra Pradesh and Maharashtra nominated Sarvashri H. Sambamurti and M. S. Palnitkar in their place. These changes were notified *vide* Ministry of Transport (& Shipping) notification No. 1-T(150)/64, dated the 30th November, 1965. Subsequently, Shri C. Sundramoorthy was also transferred and Shri V. Sankaran, Joint Transport Commissioner, Madras, was nominated on the Group in his place *vide* Ministry of Transport (& Shipping) notification No. 1-T(150)/64, dated the 7th February, 1966. On the transfer of Shri Bhatnagar to the Department of Communications, Shri R. K. Sharma, Deputy Secretary, Ministry of Transport & Shipping, was appointed Member-Convenor in his place *vide* Ministry of Transport (& Shipping) notification No. 1-T(150)/64, dated 11-8-67.

Terms of reference of the Study Group

1.22. The following were the terms of reference of the Group :—

- (i) To suggest the size of a viable unit for stage carriages, taxis and public carriers and the practical steps necessary to promote them;
- (ii) To consider the feasibility of establishing one or more organisations in each State, with a network of branches at important traffic centres, for (a) providing servicing, breakdown relief and repair facilities; (b) constructing ware-houses, terminals and rest houses for truck and bus drivers in transit; (c) setting up booking, collecting, forwarding and distributing agencies; (d) running training institutions for drivers and conductors; (e) arranging audit services; (f) settling tax liabilities; and (j) rendering other similar services to members;
- (iii) To study the role of State Transport Undertakings in organisations of the kind mentioned in (ii) above;
- (iv) To suggest the privileges and responsibilities that should be vested in such organisations; and
- (v) To recommend any other measures that may be necessary to organise the industry on proper lines.

Questionnaires

1.23. At the first meeting of the Group held on the 5th & 6th July, 1965, it was decided that the Ministry of Transport (and Shipping) should circulate detailed questionnaires to the Ministry of Railways, Major Port Trusts, State Governments and Administrations of Union Territories,

Chambers of Commerce, Universities, all India Organisations of road transport interests (e.g., Indian Roads and Transport Development Association, All India Motor Unions' Congress, Indian Institute of Road Transport) etc. So far as the questionnaire for road transport operators was concerned, the Ministry of Transport (and Shipping) was asked to supply an adequate number of copies of it to the Transport Commissioner of each State, who should be requested to distribute copies to five selected operators falling in each of the following categories, namely, (a) individuals owning one vehicle; (b) operators owning 2 to 5 vehicles; (c) operators owning 6 to 10 vehicles; (d) operators owning 11 to 20 vehicles; and (e) operators owning more than 20 vehicles. It was further suggested that the Ministry of Transport (and Shipping) should obtain information on past studies, if any, made in the different States, particularly Madhya Pradesh and Rajasthan, in regard to organisation of road transport industry through formation of viable units.

1.24. Two separate questionnaires (Annexure I & II) were accordingly prepared and distributed to State Governments/Administrations of Union Territories and others concerned on 16th/17th August, 1965. In response to these questionnaires, replies were received from all State Governments and Administrations of Union Territories except Assam, Himachal Pradesh, Jammu & Kashmir and Nagaland, 166 road transport operators, Universities, Chambers of Commerce etc.

Meetings

1.25. Six meetings of the Study Group were held altogether (*vide* Annexure III). At some of these meetings, oral evidence of 102 road transport operators and associations and representatives of State Governments/Administrations of Union Territories was recorded. A list of the parties, who gave evidence before the Group, is given in Annexure IV.

नमो भगवते वासुदेवाय

EARLIER STUDIES ON VIABLE UNITS

2.1. Our approach to the problem of viable units of road transport operators and our findings are based on a study of the subject by Committees in the past, both at the Centre and in the States, an examination of the existing conditions in some foreign countries and the analysis of evidence tendered before us by the various interests concerned. In this chapter, we confine ourselves to the first two aspects, namely, a resume of the findings of the earlier Committees and the position prevailing in the foreign countries, as far as known to us.

In the preceding chapter, we have referred to the various Committees appointed at the Centre which went into the question of formation of viable units and the recommendations made by them in this regard. Although these bodies were mainly concerned with the development of road transport, as a whole, and dealt with problems of reorganisation of the industry, as part of their general study, their findings were revealing. As stated in Chapter I, the formation of viable units received an impetus after 1950 and even statutory provisions were introduced for according preferential treatment to viable units in the matter of grant of permits, besides concession in road tax etc. Some of the State Governments have been keen on bringing about the necessary reorganisation, at least in the field of passenger transport. The success or otherwise of their programmes was examined by *ad hoc* Committees in some States. The findings of these Committees in regard to the extent to which Government succeeded in their desire to bring about formation of viable units among passenger transport operators are discussed in the paragraphs that follow, as we feel that the experiences of the earlier Committees may be useful in making our recommendations.

Report by Dr. Ramanadham

2.2. A report on 'Road Transport Industry' was submitted by Dr. V. V. Ramanadham, Reader in Commerce, Andhra University, in 1955. This, *inter alia*, deals with the problems of viable units in general. Defining the term 'viable units', the report observes that "they are units of business of such a size as would promote economy in the provision of services. A viable unit does not denote that unit of business which is the most economical. It has come to mean that unit which would result in a reasonable cost economy". On the basis of this criterion, the report states that 10 vehicles will not make a unit as economical as is expected and that it should consist of at least 20 vehicles. The report has brought out the merits and demerits of viable units and cautions that, although the formation of viable units is a step forward in the direction of organising the industry, there are a few major disadvantages of large scale units, which have to be guarded against. The report further cautions that no line of economy, which the industry is expected to gain from viable units, should be lost by the formation of such units.

2.3. The advantages arising from the viable units, according to that report, are as under :—

- (i) The viable unit spreads cost of management and over-heads over many vehicles so that the cost per vehicle would be lower than that under single vehicle ownership.
- (ii) Viable units can also have the advantage of having their own workshops, which would eventually ensure efficient maintenance of vehicles and the transport services.
- (iii) Viable units can afford to have a relatively small reserve capacity.
- (iv) Labour would get better treatment from the management of viable units than otherwise.

The above benefits are of a direct nature. In addition to these, there are indirect benefits, such as, rate and fare stability, maintenance of frequency of services as per schedules, greater amenability to controls by Government etc.

2.4. As against these, the disadvantages of viable units, according to the report of Shri Ramanadham, are higher cost of operation of vehicles under viable units (cost of checking, cost of maintenance of spare vehicles etc. are higher in the case of such units). Another disadvantage, according to that report, is that utilisation of the vehicles is smaller for vehicles under viable units than that under single vehicle ownership.

2.5. It has, therefore, been suggested by Shri Ramanadham in his report that, until the cost of road transport services is brought down to the lowest possible level, even a viable unit will not have the benefit of cost economy. The report pin-points that, whatever be Government's policy for reorganisation of the industry, they should not lose sight of these two disadvantages of such enterprises. The objective before Government should be economy and efficiency in the provision of services.

2.6. The Ramanadham Committee report further states that viable units can be formed only by voluntary amalgamation of small owners and that the scheme will not work if compulsion is used. Governments can encourage formation of such amalgamation by exempting the spare vehicles of viable units from road tax. Preferential treatment in the grant of permits to those, who have attached workshop, will also assist in more units coming in.

Report of Viable Unit Enquiry Committee in Madhya Pradesh:

2.7. A Viable Unit Enquiry Committee was set up by the Government of Madhya Pradesh in 1958 to examine the working of the viable units in Chattisgarh area of the State and to see their utility to the public *vis-a-vis* the service rendered by individual operators. The Committee submitted its report in 1960. According to the evidence, tendered before this Committee by some persons, viable units divided the areas of operation among themselves and each one of the single vehicle operators (although he had joined a partnership concern and thus formed a viable unit) was enjoying complete monopoly in his area of operation. They were also exploiting the public by charging high fares (and freight rates) and overloading the buses. The service rendered by them to the public was comparatively poor. They were indulging in tax evasion and other malpractices. The Committee, while critically going into these allegations, however, felt that, by and large, they were not correct and that, viable units in Madhya Pradesh had been found to be rendering useful service to the public. They came to the conclusion that "the condition in regard to passenger services had improved

considerably since the formation of viable units". They also observed that an individual operator, owning one or two buses, would not generally provide efficient services, as compared to the viable units in Chattisgarh area. The Committee concluded, in the end, that viable units had rendered really satisfactory services, that the position of road transport in Chattisgarh area had improved after the formation of viable units and that viable units were capable of expansion and meeting the growing needs of road transport in that area. The Committee recommended that preferential treatment for viable units should continue. They also recommended that the provision of workshop facilities should be considered as an additional qualification for the purpose of grant of permits.

2.8. It may be pointed out, in this connection, that the Madhya Pradesh Viable Units Enquiry Committee did not consider how best the formation of such units, particularly in the goods transport sector, could be secured. Their terms of reference were limited to examination of the existing viable units in the State in order to advise Government, whether there was a case for continuance of preferential treatment to these units in the grant of permits. The Committee's investigation was, therefore, limited to a comparison of the services provided by viable units and those by private motor companies and individual operators in the Chhatisgarh area.

Rajasthan Study Report

2.9. The Government of Rajasthan requested its Deputy Registrar of Cooperative Societies to go into the question of formation of viable units in the cooperative sector. The report (1962) submitted by him has stressed that formation of viable units is essential to bring better organisation and secure greater economy and efficiency to the road transport industry. According to this report, such units can be formed by pooling 5 or 10 vehicles in each unit. Viable units can be formed either by individual operators who are members of transport cooperatives, which possess one or more transport vehicles, or by forming a Central Transport Co-operative Society, with individual cooperatives as its members. The incentives suggested for viable units in the cooperative sector were: (a) procurement of tyres, spare parts and petrol; (b) acting as servicing, booking, handling and collecting agents; (c) making provision for common bus or truck/stands and parking places; (d) making available service and repair facilities; (e) liaison with Government on matters of common interest; (f) avoidance of unhealthy competition; and (g) securing legal advice. The Committee recommended, in the end, that the State Motor Vehicles Rules should be amended to make preferential treatment to cooperative viable units mandatory rather than leaving the matter to the discretion of the Transport Authorities. Concession in road tax was also suggested for viable units.

2.10. It may be mentioned in this connection that the above report was solely concerned with the formation of viable units in the co-operative sector and did not go into the problems of formation of such units among individual operators. Its findings are also, therefore, of limited significance.

Kerala Study

2.11. The report submitted in 1964 by the Transport High Level Committee, appointed by the Government of Kerala, provides useful information on viable units in that State. The Committee concedes

that the non-existence of viable units affects the efficiency of passenger transport in the State, especially in providing continuity in services, and suggests the formation of viable units in the private sector without imposing a ban, as such, on the smaller units.

2.12. The Committee has felt that, on the basis of the material available to it, the cost of operation of a vehicle under a viable unit is higher than that of a single vehicle owner. The absence of viable units, the report states, does not by itself contribute to high operational cost. On the other hand, in the erstwhile Travancore-Cochin area, the small operators, some of them owner-drivers, have been found to be paying greater attention to running of buses and incurring lower establishment costs than the big companies in that area. The absence of attached workshop is not a disadvantage to the small operators as there is a wide net-work of private workshops in the State, which enables small operators to maintain a high level of service throughout the year. The only disadvantage of a small vehicle operator is the inefficiency of passenger services to the public at times. The buses may not run to schedule and may not operate in the event of breakdown. Cautioning Government's approach to the problems of viable units, the study has urged that efficiency depends upon several other factors than the existence of viable units as the mere fact that a unit is viable is no guarantee for the operation of services efficiently. The units should satisfy the public by offering more and more amenities, running services efficiently and maintaining a healthy competition with fellow operators.

2.13. The Committee has recommended that, in order to encourage formation of viable units in the State, Government should enforce strictly the rule that an operator must have a spare but for every seven buses; such spare buses are exempted from motor vehicles tax. It has also recommended that Actual User's Licences should be granted to units holding 10 vehicles for import of spare parts.

2.14. As in the other studies, the analysis in the Kerala report is also confined to passenger services, the nature of services provided to the public and the extent of economy which would generate from the type of management etc. Mention about goods vehicles is conspicuously absent.

2.15. Road transport industry, unlike other service industries, has some peculiar features; it is highly decentralised and is generally comparable to small scale industries with the difference that it is capital intensive. This is one of the reasons why it is dominated by small *owners not only in this country but also in advanced countries like the United States of America. According to data contained in the report of the Road Transport Reorganisation Committee, 83.4% of the operators in the United States owned single vehicles each in 1950 and the position at present is not materially different. The latest figures in this respect show that small operators still account for more than 90% of the total in United States of America. According to the report of the Regional Transport Survey of the Eastern Region, less than 10% of haulage firms in the United Kingdom have more than 10 vehicles. In spite of this seemingly analogous situation existing in the road transport industry between India and the advanced countries of the West, there is one basic difference; in the Western Countries, nearly four-fifths of all carriers happen to be private carriers while in India, they form only about one-fourth of the goods vehicles.

*The expression "small owners" in this report refers to owners having 1 or 2 motor vehicles.

Nevertheless, it is worthwhile studying the measures taken by advanced countries to reorganise the road transport industry to put it on sound lines. We collected some information in this regard but regret to say that the response to our enquiries in this respect has been neither adequate nor satisfactory. However, whatever details could be collected are given in the paras that follow.

West Germany

2.16. The report of the Road Transport Productivity Team (1960) gives some interesting details in regard to the position in West Germany. According to this report, in order to reorganise the road transport industry in post-war Germany, a new law was passed in 1949 requiring the issue of fresh licences. The pre-requisites for the issue of licences were that the carrier was reliable, competent and capable of providing an efficient service. A limit was also placed on the total number of long distance licences to be issued and quotas were allocated to various States. Under this law, there was no organisation to secure the observance of tariffs, but in 1962, another Road Haulage Act was passed which created a Federal Institute, with powers to levy a fine on an erring operator. The enforcement of rates is primarily the function of this Institute but its powers in this regard can be delegated to other bodies. Such delegations has, in fact, been made in favour of the National Association of Road Transport Haulages, so that operators are free to decide whether they would like to be governed by the Institute or by the Association. Nearly 99% of the operators have opted to be supervised by their own Associations and this arrangement is reported to be satisfactory. However, the Institute is the final authority in the matter of enforcement.

This Institute examines six million consignment notes or log sheets or loading lists. In addition to enforcing freight rates, the Institute also maintains comprehensive statistics on motor vehicles and related matters.

Japan

2.17. The Government of Japan have not taken any special measures for formation of viable units of road transport operators in the country. Various private organisations have been established for the benefit of road transport agents and for promoting their business efficiency. At the head of these private units is the Japan Automobile Chamber which coordinates their activities and provides them the necessary guidance. The following are the main private organisations, all of which have offices in each prefecture :—

- (i) All Japan Taxi Cab Association.
- (ii) Japan Truck Association.
- (iii) Japan Bus Association.
- (iv) Others.

Belgium

2.18. No special measures have been taken by the Belgian Government for the creation of substantial groups of road transport operators. The importance of transport undertakings in the country is variable. The most widespread form is the craftsman or family undertaking. The undertakings of medium importance adopt generally the form of private societies, with limited responsibilities, while the most important ones only constitute

themselves into limited companies. These companies do not enjoy any preference in the grant of authorisations or licences. Credit facilities are provided to the undertakings mainly by private financing institutions. Reduction in road taxes is given under certain conditions by the Ministry of Finance independently of the form of management of the undertakings. The primary object of the grouping of transport operators is to defend the interests of their professional sector in general and of their affiliates. The most representative group in the country is the "Belgium National Federation of Road Transporters" to which various provincial or specialised groups are affiliated. Though frequent contacts take place between the Government of Belgium and this Federation, it cannot be said to be rendering any specific public service.

U.S.A.

2.19. Broadly speaking, the inter-State Commerce Commission is the authority responsible for regulation of operation of vehicles. Its functions in relation to motor carrier's services are primarily to consider applications for new and extended authority from individual carriers and for transfer of such authority from one carrier to another. In considering such applications etc., the Commission is required to apply specific criteria to ensure that the service sought to be performed will meet a public need or that the transaction will be consistent with public interest. At the end of June, 1965, about 17,216 vehicle operators held authority from the Commission and were subject to economic regulation by it. Licences or authority to perform operations are given based on public need. So long as an applicant establishes his ability to receive authority and perform the operations to be authorised and to comply with the other requirements of the Commission, the form of organisation is not of consequence. During the last many years, a number of private individuals have been granted operating authority. In course of time, it is possible for an individual operator to build up his operations and increase his economic structure either by expanding and improving his services within permissible limits of the grant of authority or by acquiring other operations with the approval of the Commission. The Commission has no authority to grant credits of any kind, relief from taxation or other such incentive. Associations have been formed within the motor carrier industry to provide assistance and advice to their members and others on various matters of mutual interest. Some specific categories of carriers have formed Organisations within their particular sphere of activity *e.g.*, Movers' Conference of America, American Trucking Association etc.

EVIDENCE BEFORE US

3.1. In this Chapter, we propose to examine the evidence tendered before us by representatives of State Governments and Union Administrations, Associations of road transport operators, Chambers of Commerce, university scholars and others. The names of the persons who appeared before us are given in Annexures III and IV. Although the consensus appeared to be in favour of formation of viable units in road transport industry, different views were expressed in regard to details such as the minimum or optimum size of a unit, the nature of incentives necessary for the formation of such units etc. None of the persons who tendered evidence, mentioned what should be the optimum size on the basis of cost and operational results. In other words, the views expressed were not supported by any statistical information. Nonetheless, several view points were placed before us.

On Viable Units and the number required

3.2. We find that the position varies widely from State to State in regard to the concept of 'viable unit', the incentives available to these units at present, the degree of success of Governments' policies, the present stage of development in this field, the recent trends in dissolution of viable units and the economic benefits of such units. Some State Governments have made statutory provisions for encouraging viable units in the road transport industry, following the advice given by the Government of India in 1958. But these provisions, in practice, have been applied mainly to viable units of stage carriage operators; no such provisions have been made for public carriers. Orissa is the first State which specified a minimum of 5 public carriers as constituting a viable unit. The Administration of Manipur prescribed 25 public carriers as constituting a viable unit. No other State appears to have any specific programme at present for formation of viable units in the goods transport sector.

Even in respect of passenger transport, the minimum number of stage carriages required for formation of a viable unit varies considerably. It was 5* in Andhra Pradesh, Kerala, Madras, Mysore, and Orissa, 7 in Punjab, 10 in Maharashtra, 15 in Manipur and 20 in Madhya Pradesh (The Government of Madhya Pradesh are now considering reducing this to 10). The Governments of Bihar, Gujarat†, Rajasthan, West Bengal and Delhi have made no provision for encouragement of viable units (other than co-operative societies) even in the field of passenger transport. The position, which existed in 1965 in some of the States in the matter of viable units is given below :—

*With 1 spare bus.

†Passenger transport in Gujarat is almost wholly nationalised; as such the question of formation of viable units in the field of passenger transport in that State does not arise.

Name of State	Minimum number of Stage Carriages	Minimum number of public carriers	Minimum number of Taxis
Andhra Pradesh	5	Not prescribed.	Not prescribed.
Assam		Information not available.	..
Bihar . . . . .	..	Not prescribed.	..
Gujarat . . . . .	..	Do.	..
Jammu & Kashmir		Information not available.	..
Kerala	5	Not prescribed.	..
Maharashtra	10		..
Madhya Pradesh	20	Not prescribed.	..
Madras	5	Do.	..
Mysore	5	Do.	..
Orissa	5	5	Not prescribed.
Punjab	7	Not prescribed.	..
Rajasthan		Do.	..
Uttar Pradesh	20	Do.	..
West Bengal . . . . .	..	Do.	..
Delhi		Do.	..
Manipur	15	25	10
Tripura	20	Not prescribed.	

On Concessions and Incentives

3.3. In the States which have included provisions relating to viable units in their Motor Vehicles Rules the only concession contemplated for such units is preferential treatment, over single vehicle operators, in the grant of stage carriage permits. In addition to this, there is one State, namely, Punjab* which gives 10% concession in motor vehicles tax to viable units but this is admissible to units owning more than 10 vehicles, although the minimum number of vehicles required to be eligible to be treated as a viable unit is 7 in that State.

Tax concession is admissible in some other States also for identical purposes. In Kerala, for each unit holding 7 (route) permits for stage carriages, one spare bus is compulsory and this spare vehicle is exempted from motor vehicle tax. (According to the Kerala Motor Vehicles Rules, a viable unit can be formed with 5 stage carriages). However, in States like Madras, for every 5 buses having different route permits, 1 spare bus which is compulsory even now was tax free† some years back. Similar provisions still exist in the States of Kerala and Mysore for exempting spare buses from payment of motor vehicle tax.

*Now Haryana too.

†The Government of Madras withdrew this concession following the reported misuse by operators, of employing the spare bus on regular scheduled services.

Evaluation of Progress

3.4. According to the information obtained from State Governments, the various measures introduced for encouragement of viable units have to a limited extent, yielded results in Madras, Madhya Pradesh (Chhatis-garh area), Tripura and Manipur. In Madras, according to the State Government, the trend is for the formation of viable units by operators owning 3 or 4 buses, but the position remains unchanged in the case of operators owning 1 or 2 vehicles. In Manipur, owners having 1 or 2 buses have formed themselves into co-opertive societies, which are entitled to route permits. It has been reported that 15 such societies were formed after the announcement of the State Government's policy on viable units. In the other States, there has been no significant progress in the formation of viable units. The total number of stage carriages in some of the States* and the number of single vehicle owners in them during the year 1965 are shown in the table below :—

Name of State/Union Territory	Total number of buses	Number of single bus owners	Percent- age of 3 to 2
Manipur	160	72	45%
Madhya Pradesh (for two regions only)	3,054	1,882	51%
Andhra Pradesh	3,927	662	17%
Pondicherry	70	16	23%
Madras	5,638	269	4%
Maharashtra	148†	28	19%

The same information in regard to public carriers in some of the States in 1965 is given below :—

Name of State/Union Territory	Total number of public carriers	Number of single vehicle owners	Percent- age of 3 to 2
Madhya Pradesh (for 2 regions only)	2,183	1,833	84%
Andhra Pradesh	8,576	6,519	76%
Pondicherry	135	131	96%
Gujarat	12,682	12,320	97%
Kerala	5,480	4,000	73%
Madras	10,076	7,213	72%
Manipur	614	506	82%

Statistics of Single Vehicle Owners

3.5. Statistics for the other States are not available. However, in the course of the evidence tendered before us, the representative of the

*The particulars from other States have not been received.

†The data for Maharashtra relates to number of bus operators.

Government of Mysore stated that there were 14,000 commercial vehicles in that State and only 4 companies held 8 to 10 vehicles each. In Maharashtra, out of a total 23,895 truck operators, 22,733 or 95% of the total hold a single truck each. In Andhra Pradesh, the bulk of the total of 7,300 trucks (registered) was held by single vehicle operators. The data available to us makes it clear that the trucking industry consists predominantly of single vehicle owners. In regard to passenger traffic, the dominance of single vehicle owners is not there to the same extent. Taking commercial vehicles as a whole, 89% thereof were stated to be under single vehicle ownership in 1963, according to estimates given in the final report of the Committee on Transport Policy and Co-ordination (1966). The proportion of operators owning 5 vehicles or less stood at 98 per cent. The distribution of transport operators according to the number of vehicles owned in December 1952 and March 1963, was as below :—

*Road Transport Operators-Distribution of Vehicles
(Buses and Trucks) Owned*

Size of Fleet	Number of operators		Total number of vehicles owned (estimated)	
	December	March	December	March
	1952	1963	1952	1963
One vehicle each	46,000	136,000	3,153	136,000
2 to 5 vehicles each . . . . .	..	14,046	..	50,000
6 to 5 vehicles each	1,500	3,187	30,000	61,449
51 to 100 vehicles each	50	32	3,000	2,000
More than 100 vehicles each	25	37	14,000	21,000
TOTAL	47,575	153,302	130,153	270,449

The distribution in March 1963 of operators, according to size of fleet in different States and Union Territories, is shown in the following table :—

*Distribution of Road Transport Operators in Different States According
to Size of Fleet (Buses and Trucks).
(Estimate for March 1963)*

	Number of persons owning							Total
	One vehicle	2 to 5 vehicles	More than 5 but not more than 10 vehicles	More than 10 but not more than 20 vehicles	More than 20 but not more than 50 vehicles	More than 50 but not more than 100 vehicles	More than 100 vehicles	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	6,800	900	99	..	..	..	1	7,800
Assam . . .	1,700	136	9	2	1	1	1	1,850
Bihar . . .	8,000	550	215	100	25	5	5	8,900
Gujarat . . .	11,000	1,300	75	19	3	2	1	12,400

1	2	3	4	5	6	7	8	9
Jammu & Kashmir	3,500	140	40	18	1	..	1	3,700
Kerala	5,800	350	170	29	..	..	1	6,350
Madhya Pradesh	8,000	380	100	40	21	5	4	8,550
Madras	5,900	300	260	30	14	4	2	6,600
Maharashtra	27,900	3,600	250	150	95	1	4	32,000
Mysore	7,800	730	170	65	30	2	3	8,800
Orissa	3,500	780	70	30	15	3	2	4,400
Punjab	6,300	680	110	65	39	1	5	7,200
Rajasthan	6,100	200	250	40	7	2	1	6,600
Uttar Pradesh	12,700	350	35	9	4	1	1	13,100
West Bengal	18,000	3,000	130	10	6	2	2	21,150
Delhi	2,000	400	70	20	8	1	1	2,500
Himachal Pradesh	..	..	..	..	..	..	1	1
Manipur	500	60	90	90	7	2	1	750
Tripura	500	100	45	3	2	..	..	650
Andamans and Nicobar Island	..	..	..	1	..	..	..	1
TOTAL	136,000	14,046	2,183	721	278	32	37	153,302

NOTE : The above table gives only an estimate of composition of operators in March 1963. The actual figures for subsequent years in respect of some States have been somewhat different.

We have not been able to obtain statistics of the composition of vehicle owners, subsequent to the reference year 1965. However, we are in agreement with the observation of the Road Transport Taxation Enquiry Committee in this regard that there are no reasons to believe that this pattern has substantially changed since then.

Views of the State Govts.

3.6. Only a few State Governments have expressed definite views on the minimum or economic size of a viable unit. The Government of Mysore favour a viable unit consisting of 5 vehicles while the Manipur Administration suggest 20 vehicles as the minimum. The Government of Mysore have made the plea that the range of operation allowed to vehicles should also be taken into account in this connection. According to them, a unit consisting of 5 vehicles would be the ideal if the range of operation of the bus does not exceed 50 miles and a unit with 10 vehicles would be desirable for operations beyond 50 miles. In the case of public carriers, a distinction has been suggested between units operating intra-state services and those providing inter-state services. A unit with 5 trucks for intra-state services and 10 for inter-state services has been suggested as the optimum size.

The Government of West Bengal have altogether different views in the matter. While they favour a unit with 5 vehicles of individual operators, both in the passenger and goods sectors, they suggest that a co-operative society should have 10 vehicles to be treated as a viable unit. Some other State Governments feel that an optimum unit would be one with anything between 5 to 50 vehicles. The Union Administration of Goa, Daman and Diu suggest that 100 vehicles could be an optimum size. We would, however, like to point out that, while laying down the optimum size of units in the

field of passenger and goods transport, the extent of benefit in terms of cost and profit has not been brought out in quantitative terms by any State Government.

Incidentally, many State Governments have suggested an optimum size for taxi operators also. The Administration of Goa, Daman and Diu and the Government of West Bengal favour viable units of 20 taxis each. Some State Governments prefer units with 5 to 10 vehicles. A few others, particularly Gujarat, Maharashtra and Madras, are not in favour of viable units of taxi operators.

On Principles Governing Viable Units

3.7. In regard to the guiding principles for determination of the size of the fleet of a viable unit, it has been generally stated that, since efficient operation and economic maintenance are the end results of Government's policy on viable units, the factors that contribute to these objectives are *inter alia*, capacity for capital investment and experience in the field. Efficient and economic operations also depend, to a large measure, on the conditions in the area of operation, the nature and length of routes, existence of arrangements for service and repairs of vehicles and for providing passenger amenities. In the case of goods transport, the facilities available for collecting, forwarding and distributing of goods is an additional factor to be taken note of. The Government of Madras, while agreeing to these suggestions, suggest that the management of a given unit should also result in maximum vehicle utilisation, efficient supervision of services and sound labour-management relations. The Government of Maharashtra have observed that the capacity of the management for maintaining proper accounting should also be taken into consideration. The Government of Bihar, however, caution that, while laying down principles for determination of the size of a unit, it should be borne in mind that it should not lead to creation of vested interests and monopoly in the trade.

3.8. A view has also been expressed in this connection that, where any particular person holds vehicles with permits granted in more than one region, or States which are contiguous and not inter-linked, and where operational control is not possible from the headquarters, it is not necessary to take the total number of vehicles held by such owner for deciding whether his unit is viable or not. But vehicles having permits in different regions or States, where operational control is possible from the headquarters, should be taken into consideration for the purpose of determining whether the unit is viable or otherwise. The economies of a viable unit can be derived only where the owner holds permits in respect of one particular category of vehicles. It is not desirable to take into account the total number of permits held by a person for different categories of vehicles to determine whether his is a "viable unit". On the other hand, some State Governments (Mysore, Pondicherry) hold a diametrically opposite view. They consider that the number of all transport vehicles (stage carriages, goods vehicles and motor cabs) owned by an operator should be considered for deciding whether his unit is viable, since even such a unit may be able to derive the economies and efficiency of operation.

3.9. In regard to the factors retarding the development of viable units in the country, the evidence is almost unanimous. Since the road transport industry consists of small operators, who are not sufficiently educated to understand and appreciate the benefits of large-scale organisation, they are not enthusiastic about any change in the existing set-up. Further, the

human factor also is of relevance in this connection. Being individualistic, a single vehicle owner is not inclined to participate in common management, on account of distrust of others and, therefore, avoids combining with them. This sense of insecurity among small operators may not be unwarranted, as under common ownership, the individual is likely to lose the flexibility of operation which is so essential for road transport.

3.10. The other factors, which are equally important are of economic origin, as long as the operator has no financial stability to keep his services efficient and economic, get monetary assistance from external sources to expand his fleet or provide facilities for repair, servicing, warehousing etc., a mere provision in law for preference to viable units in the grant of permits may not be of much help in promoting the development of such units.

3.11. Some State Governments feel that the absence of a clear cut Government policy in regard to viable units is also an important factor for the rather slow development of viable units in the country. On the one side, Government wants large-scale units to come into existence. On the other, a strict application of the different provisions of the law for regulation of road transport and of the conditions of work of persons employed in the industry defeats the basic purpose of the provisions relating to preference for viable units. The Government of Uttar Pradesh felt that there is no accepted definition of a "viable unit" in the law in force; as such, there can be no incentive for operators to form viable units.

3.12. Lastly, the insecurity lurking in the minds of operators in regard to the future of the industry, especially with regard to passenger transport in private sector, is a major deterrent to the creation of large-scale units. So long as Government do not enunciate clearly their policy in regard to nationalisation of passenger transport in the next few years, the private operators may not think seriously of rationalisation of services, leave alone expansion.

3.13. The factors, indicated above, besides lack of operational control, have led to the disintegration of some of the bigger units in the recent past. If, therefore, the industry has to be reorganised, a certain amount of Government patronage, atleast in the initial stages, is inescapable. We would like to refer here to the view held by the State of Uttar Pradesh that Government patronage is essential to maintain the services efficiently. Adequate credit facilities, grant of licences for import of spare parts, tyres etc., licensing of booking, forwarding and distributing goods are some of the measures suggested to encourage formation of viable units. The Government of Mysore have, however, remarked that it should be ensured that Government patronage does not result in complacency among operators and kill their initiative, leading to inefficiency of services.

3.14. On the question whether joint ownership of vehicles should be an essential condition for formation of viable units, opinion is sharply divided. The Governments of Andhra Pradesh, Kerala, Madhya Pradesh and Mysore and the Administrations of Delhi and Goa are of the view that this is essential. The Governments of Bihar, Gujarat, Maharashtra, Manipur, Tripura and West Bengal do not, however, subscribe to this view.

Evidence of private Organisations

3.15. We have been able to secure information and views from several private road transport organisations, transport users, besides some University scholars. All of them have expressed themselves in favour of viable

units, the only exception being the Delhi Transporters' Association, which has made a strong plea against promotion of viable units on the ground that the services of such units are neither economical nor efficient. According to this Association, each transport unit should not have more than 2 vehicles, if efficiency is to be preserved. In the oral evidence before the group, the representatives of this organisation stated that small owners, having one or two vehicles each, have been able to function more efficiently and also secure greater economy in cost as compared to a fleet owner. They have not, however, been able to prove their contention with the necessary supporting data on the cost of operation of vehicles. It transpired that this Association represents the interests of booking agents only.

3.16. The Indian Roads and Transport Development Association has reiterated the observations and recommendations made by the Road Transport Reorganisation (Masani) Committee (1959). The spokesman of this Association, who gave evidence before us, contended that a large number of viable units could be formed overnight if the permit-holders were authorised to employ as many vehicles as they wished, on the analogy of the practice in the United States of America. In other words, the existing practice of issuing a separate permit for each vehicle should be given up. This involves a radical change in the existing licensing system under the Motor Vehicles Act. The representatives of the Bengal Chambers of Commerce did not, however, agree with the above suggestion (of the Indian Roads and Transport Development Association) and held that, if it was implemented, several new problems will have to be faced by States.

3.17. The views of all other organisations are more or less identical in respect of most of the questions included in our questionnaires. The All-India Motor Unions' Congress has stated that the guiding principles in the determination of the size of a viable unit in the field of passenger transport are :—

- (a) ability to provide break-down service;
- (b) ability to cater to needs of seasonal and/or occasional traffic;
- (c) ability to provide maintenance and repair facilities for the fleet, so as to reduce, to the minimum, number of idle days of buses;
- (d) compactness of area of operation;
- (e) ability to provide passenger amenities both at the termini and *en route*;
- (f) ability to provide amenities to the staff and workers;
- (g) ability to raise financial resources for development and improvement of services; and
- (h) ability to plough back resources into the business.

As for goods transport, the Congress suggest the following factors for consideration :—

- (a) ability to inspire confidence in the public by ensuring safety of goods carried and certainty of service;
- (b) ability to provide godown and warehousing facilities;
- (c) ability to run own booking and forwarding agency;
- (d) ability to have maintenance and repair facilities;

- (e) ability to raise financial resources;
- (f) ability to provide the required amenities to workers;
- (g) ability to provide efficient and economic administration of the undertaking;
- (h) compactness of area of operation.

The Indian Institute of Road Transport and the Indian Roads and Transport Development Association have observed that "efficient management structure, proper accounting procedure, adequate financial resources and working capital, trained staff, fair labour practices, amenities to the staff as also to the public and adequate provision for maintenance are the principles that should decide the size of a viable unit." More or less the same principles have been enunciated by the Allahabad University which has stated that "each fleet should have sufficient block capital and working capital to attain a degree of financial stability; so that variations in demand do not compel the permit-holders to close down their business. The size should be big enough to provide dependable service at reasonable rates as well as to take financial responsibility for loss, damage and pilferage of goods."

Size of the Unit

3.18. Although there appears to be unanimity of approach among non-official interests to the principles governing the size of a viable unit, there is divergence of opinion on the actual size of the unit. The following table indicates the size of the unit, suggested by some of the organisations :—

Name of Party	Number of vehicles	Vehicles on inter-State Services	Vehicles on Intra-State Services
(1)	(2)	(3)	(4)
All India Motor Unions' Congress	..	10	5
Delhi Transporters' Association	2	..	..
Indian Roads and Transport Development Association	..	10	5
Gujarat Vepari Mahamandal	5	..	..
Nagpur University	15 for stage carriages 10 for public carriers	..	..
Jiwaji University	..	8	4 for stage carriages 8 for public carriers
Shri Iqbal Singh, Operator, Bombay	10	..	..
Shri Kulkarni, Bombay	..	25 trucks	20 trucks
Shri M. N. Shroff, fleet owner, Amaravati	35	..	..

(1)	(2)	(3)	(4)
K. G. Subramanian, Secretary, Western India Automobile Association	10	5
Shri Naik, Kolhapur Motor Transport Producers' & Consumers' Co-operative Society	20	10
Shri P. V. S. Mani, Madras Bangalore Transport Company, Madras	25	15
Shri Govindaswamy, Madras Motor Vehicles and Allied Industries Association, Madras	25	10 for trucks
Indian Institute of Road Transport, Madras Branch	20	20 for buses
Shri Raghavan, Palanaappa Transport, Madras	25	10 for trucks
Dr. N. Sanyal, Calcutta	7 to 8	5
Shri G. L. Sayal, Calcutta	10	5

3.19. As regards the factors inhibiting the formation of viable units, the All-India Motor Unions' Congress has stated that the Government are not consistent in their policies and do not really seem to want viable units to come in for the fear that this may lead to monopolistic tendencies. The operators are also, of course, partly responsible in that they have misgivings about the *bona fides* of those joining together. Elaborating this point further, the Indian Roads and Transport Development Association has stated that there is a lacuna in the Motor Vehicles Act which does not allow a permit to be granted in the name of a viable unit. The Association further contends that the present high level of taxation is also a disincentive to organised growth of the industry. According to the Allahabad University, shortage of vehicles* and high capital requirement, absence of tax incentives and limited management capacity are some of the inhibitory factors which stand in the way of formation of viable units.

The All-India Motor Unions' Congress has made the following suggestions for speedy formation of viable units :—

- (a) A clear and firm policy of encouraging and preferring viable units should be enunciated;
- (b) The policy should be widely publicised as also the concessions and preferences to be given;
- (c) A time-limit should be set for individual operators to come together leaving the legal form of combination *viz.*, partnership, joint stock company (public or private) co-operative society or only a service co-operative or some other loose form of combination to their choice;
- (d) After the deadline, individual operators may even be compelled to join a viable unit;
- (e) The policy will have to be written down into a number of statutes, like the Motor Vehicles Taxation Act (for giving relief in taxation), Motor Vehicles Act and Rules for recognising these units (in case of loosely-knit units) for preference

*At present, however, the position regarding availability of commercial vehicles has improved considerably.

in grant of permits and counter-signatures etc., in other Acts for giving preference to viable units and for direct financial aid through banks or other State Institutions;

- (f) Formation of viable units will be expedited if, in the case of stage carriages, different operators on a particular route are persuaded to come together. In the case of taxi cabs in a big city or town, the amalgamation will have to be area-wise. In the case of public carriers, all of them will have to be grouped together according to area of operation. Public carriers having counter-signatures in one State may, as far as possible, be induced to join with other operators in the same State. However, in the case of viable unit of public carriers, it may be necessary sometime to cater to a much larger area with branches at different places, as is the case now with some of the larger transport companies. Even in such cases, it may be necessary, after some time, for viable units having 10 or 20 trucks to join together with other similar units to provide common facilities for booking and storage of goods, and for providing rest houses and other amenities *en route* to their drivers;
- (g) It may be left to various individual managements of the units in any particular place of business to come together (or not) which they would surely do after having seen the good results of forming viable units, for some time;
- (h) It is strongly recommended that service co-operatives of individual operators should be formed where other forms of viable units are not possible; in such co-operatives, the members should not lose their individual ownership and/or identity but should join together (for all practical purposes and for all their dealings with public and/or the Government). Here, it may be made clear that the form of a viable unit is immaterial, so long as it has a legal status, so that it can collectively hold property, enter into a contract, institute suits and other legal proceedings and do all other things collectively for its members to enable them to run their business efficiently. A viable unit, therefore, can be an individual, a firm, a joint ownership concern or a service co-operative having individual ownership but common identity for most of the purposes. Short of a service co-operative society, it is difficult to suggest what other legal shape a loosely-knit unit or an association of transport operators can have but, if any, is suggested and is found acceptable there cannot be any objection to it. In the case of service co-operatives, it is true that it is difficult under the Motor Vehicles Act and Rules to treat them as units, in so far as grant of permits, counter-signatures or similar other facilities are concerned, but some way for this has to be found. The Act and the Rules may have to be amended to treat such a group (by common consent of all its constituents) as one unit, to be represented by its office-bearers. Once Government come to a decision that viable units will be encouraged, these facilities, *viz.*, grant of new permits to small operators to enable them to grow or to facilitate formation of a unit for transfer of permits will have to be instantly given.

THE NECESSITY OF VIABLE UNITS

4.1. We address ourselves, in this Chapter, to the central theme of our investigations, namely, whether there is need to encourage formation of viable units in the road transport industry or whether it should continue to be governed by the *laissez faire* conditions which seems to prevail at present. The basic issue before us is not the formation of viable units merely on doctrinaire or theoretical consideration; we are actually more concerned with the steps that are necessary to foster greater efficiency and economy in road transport services through institutional changes to enable it to render better service to the public. It is in this context that we analyse the advantages and disadvantages of the existing organisational pattern in the road transport industry examine to what extent it hinders the orderly development of road transport and also suggest measures that would help the industry to develop on sound lines. Our reasons against the existing set-up of the industry and the disadvantages arising therefrom are several and are discussed in the paragraphs that follow.

Growth of Road Transport vs. other Sectors

4.2. On the basis of the evidence before us, it is evident that there was a steady growth in the number of motor vehicles in the last 20 years. The registration of motor vehicles increased four-fold during the last two decades. As against a vehicle population of 3.8 lakhs in March, 1951, it is estimated that the number of vehicles rose to 11.09 lakhs* in March, 1966. The following table illustrates the growth of motor vehicles in this country :—

Year ending 31st March	Number of vehicles in lakhs
1951	3.08
1952	3.09
1953	3.34
1954	3.53
1955	3.76
1956	4.25
1957	4.58
1958	5.02
1959	5.02
1960	6.05
1961	6.64
1962	7.11
1963	8.82
1964	8.90
1965	10.06
1966	11.09*

The Road Transport Taxation Enquiry Committee has held that the rate of growth in the road transport industry has not been commensurate with the

*The provisional estimates are 10.09 lakhs.

requirements of the economy. Annexure V will be of interest in this connection. In respect of 22 industries for which growth indices are given for the years 1951—66, we find that the rate of growth of "transport equipment industry" is less than that in 16 other industries during the same period. This leads us to believe that the supply of transport has not been keeping pace with the general growth in other primary sectors of the economy. We are aware that few years ago the shortage of overall transport capacity in this country was so great that there was a serious transport bottleneck resulting in the dislocation of the coal industry. It was openly acknowledged by the Planning Commission and other expert bodies that the transport facilities would fall far short of demands by the end of the Third Five Year Plan and that there was an imperative need to expand the road transport capacity. If all these contentions are a guide, we must conclude that there should be conditions of a "sellers market" in the road transport industry at present—a situation which is conditioned by shortage of transport supply and consequently higher prices for transportation (fares and freights) than what would otherwise have been the case under the normal conditions of supply and demand. But, in practice, this is far from true, particularly in the case of trucking industry. In spite of the admittedly lower transport capacity and considerable increase in prices of all commodities in general and motor vehicles, motor vehicles components and motor fuel, in particular the prevailing freight rates have not increased to the same extent; in certain regions, they had, in fact declined.

Increasing Cost and Decreasing Revenue

4.3. In Annexures VI, VII and VIII, we have given three separate statements showing the increases in the prices of various items which go to constitute the cost of operation of motor vehicles. It can be seen that a TMB chassis which was priced at Rs. 33,200 in 1960, cost Rs. 44,000 in 1966.* The cost of a tyre, which was at Rs. 475 in 1960, is now over Rs. 800. A litre of diesel, which was 46 paise in 1960, is about 90 paise now. The hire-purchase charges which were 9-12% at one time (in 1960) is, at present, 10-15% (flat). On account of these factors alone, the cost of operation has almost doubled as compared to the position existing in 1960; but the prevailing freight rates have not increased to the same extent. The statements in Annexures IX and X indicate the changes in freight rates over the last 6-7 years in some regions and show how in some cases the rates have even fallen in spite of increases in the cost of operation. We would like to refer in this respect, to the findings of the Road Transport Taxation Enquiry Committee in regard to changes in freight rates and earnings of operators, particularly the smaller ones. The report states that the trend of increase in cost over the last 15 years is noticeable in all sectors of the economy, including railways and road transport. There is one significant feature which, however, is peculiar to road transport. While all elements of cost have been increasing, the road freight rates have not increased in the same proportion. In certain regions, they have remained either stationary or have even gone down. While the Oil Companies used to pay a rate of Rs. 2 per mile for a round trip 5 years ago, they paid Rs. 1.50 only per mile in 1967. Even some of the Government agencies stated that the freight rates had gone down during the last five years. This aspect requires serious consideration.

*The list price of TMB chassis in 1958 was Rs. 26,820 while it was priced Rs. 42,073 in February, 1968.

Fall in Freight Rates

4.4. According to the Committee on Transport Policy and Co-ordination, the prevailing freight rates in many regions in this country were invariably more than Re. 1 per truck mile.* On certain short routes like Delhi-Panipat, it was Rs. 1.67 per truck mile and between Bombay-Delhi it was Rs. 1.25 per truck mile. The prevailing freight rates in many sectors appear to be round about Re. 1 per mile, particularly for the small operators. It may be that, in certain cases, well-organised companies might be charging slightly higher freights; the small operators, who constitute the bulk of transport operators, in this country, do not get more than Rs. 1.25 per mile in any region in this country. The data in Annexure IX indicates that, in Rajasthan, the prevailing freight rates are steadily going down. For instance, between Jaipur and Calcutta, the rate was 96 paise in 1958 as against the rate of 84 paise per truck mile in 1966; between Jaipur and Ahmedabad, it was 94 paise in 1961 and 81 in 1966. The position was more or less similar for haulage, between Jaipur and Agra, Jaipur and Jodhpur and Jaipur and Udaipur. The situation, as it exists in the trucking industry in this country, is very aptly described by the Road Transport Taxation Enquiry Committee in these words, "we hold that the industry would not grow as long as the freight rates are at low levels and the cost of operation and the taxes are at the present level".

4.5. We have taken pains to explain the above position only to show that even in conditions of the "scissors market" created by the shortage of transport capacity, there has been a continuous fall in the prevailing freight rates in the road transport industry; this is a situation which needs to be corrected, the position may appear to be anomalous. In our view, the inherent defects in the existing institutional set-up of the road transport industry are responsible for these conditions. The Road Transport Taxation Enquiry Committee has also made a pointed reference to the fact that it has not been possible for the road transport industry to increase freight rates for the following reasons:—

- (i) Possible diversion of traffic to other modes of transport.
- (ii) Lack of organisation among truck operators, most of whom are single vehicle owners, subject to unhealthy competition.
- (iii) Lack of cost consciousness.
- (iv) Non-regulation and absence of any control over the activities of middlemen and brokers.
- (v) Low utilisation of trucks".

The crux of the issue is that the defects in the present system of road transport industry, brought about by the dominance of single vehicle operators, are responsible for pegging down transport prices to uneconomic levels.

Middlemen/Brokers/Booking Agents

4.6. The existence of brokers/booking agents, who call themselves as transport companies has also contributed to a large extent to the present malaise. It is not our intention to discuss the *modus operandi* of the booking agents except to explain how these middlemen are perpetuating the conditions of depression in the (road) freight market. According to

*The figures in this paragraph are averages for round trip.

the evidence collected by a Research Team of the Ministry of Transport and Shipping, the difference in the freight rates charged by the 'booking agents' and those received by the individual operators is considerable. In some parts of the Punjab, the transport companies (which may or may not be having vehicles of their own) charge Rs. 2 per truck mile, whereas a single vehicle operator in the same place is prepared to carry the same load at Re. 1 per mile. This makes all the difference, so far as the economics of road transport operation is concerned. There is no appreciable gain to the transport user (i.e., the public) as he is required to pay a higher freight to booking agents who appropriate the major share of the freight for themselves. It is unfortunate that the booking agents are growing in number in this trade. During the discussions with big and small operators, we were told that there was no hard and fast rule for the booking agents in the matter of procuring goods from consignors or offering goods to actual transporters, the whole transaction being decided at their discretion. We do not have adequate data to determine the number of such booking agents operating in this country and the extent of damage they cause to the transport industry. We do not, for a moment, forget the useful role which can be performed by booking agents by bringing consignors and transporters together. But the present system of working of booking agents, results in diminution of the earnings to the actual transporter. We have come to know that in each of the big cities there are about 200 such booking agents whose job was just to collect goods from a number of consignors and arrange for their transportation by different transporters. There is a wide net-work of booking agents even in the districts. According to our information, there are atleast 20 such booking agents in each district. It may, therefore, be reasonable to conclude that there are in this country a large number of booking agents, running into thousands, the majority of whom do not have any vehicles of their own. This important section of the road transport industry, namely, booking agents (brokers), whether good or bad, has not so far been subjected to any supervision and control. The amount of business done by them is considerable, as in most cases, it is through these booking agents that small operators get loads for their vehicles. The disadvantages of having such an unregulated booking agency system may be summed up as follows:—

- (i) While it may be true that it acts as clearing house first by pooling the consignments at a particular place and then transporting them to their destination without bringing the consignors and the transporters together, their operations are irrational, arbitrary and leading to exploitation of small operators as the ruling freight rates in the market are controlled by these middlemen.
- (ii) As a rule, they offer goods to operators who belong to other stations who are in need of return load and are therefore subject to pressure. Such operators are prepared to accept rates that would just meet their running expenses. Such uneconomic operations are not good for the industry in the long run. Although normally the amount of 'Commission' charged is supposed to be 6-10% in actual practice, the differential between the freight charged to the consignor and the amount actually paid to the operators even exceeds 25 per cent in many cases. Moreover, the booking agents do not disclose the freight rates charged by them from the consignors. Even when a booking agent collects freight at Rs. 2 per truck

mile for "smalls", he accumulates all such parcels and sends them in one lot in a whole truck paying a freight of Re. 1 per truck mile and charging on that rate a commission of 6%.

- (iii) On certain occasions, we were told, these companies also charge the goods tax levied by the State, ranging from 5% to 20% of the freights as the case may be. This additional charge is also collected from the consignors but is not always passed on to the operator, while under law it is the responsibility of the operator to pay the tax to Government.

Annual turn-over by Booking Agents

4.7. The annual turn-over of freight charges collected by these booking agents/middlemen appears to be staggering. Assuming that only one half of the total volume of traffic, moved by road, passes through these booking agents, the figure works out to 20 billion tonne-kilometres at present. At the rate of 20 paise per tonne-kilometre, the amount of freight collected from the consignors would work out to Rs. 400 crores. The actual amount retained by them is a matter of conjecture and is not known. An important sector of the industry, which is so lucrative has so far escaped any control either by the State or the Centre. This also leads to other mal-practices which we need not go into here. In our view there is urgent need to control the booking agents and bring this class of businessmen under a measure of discipline. We, however, feel that licensing of the booking agents, for which, we understand, an amendment to the Motor Vehicles Act, is being made, will not, by itself, bring the desired results. We recommend that uniform model rules should be prepared for application throughout the country, spelling details in the matter of licensing, accounting, hours of business, terms under which consignments may be accepted from consignors and the terms of offering load to actual transporters, the commission to be charged by the booking agents, the vouchers to be used, the records to be maintained, the minimum number of vehicles to be owned, provision for storage facilities, liabilities against pilferage, theft or loss of goods etc. It may also be necessary to provide for a fixed percentage to be taken by these middlemen as commission and also the minimum freight to be payable to operators. We would recommend further that the working of booking agencies will have to be gone into in detail by a suitable body of experts to lay down the guide-lines for regulation of this sector in the road transport industry. Apart from governmental control, it should be possible for the road transport industry to so adjust itself that the operators no longer remain at the mercy of booking agents for their business.

Cost of Operation

4.8. One of the criticisms levelled against small operators is that their operations are not economic. It has been represented that the cost of operation of a vehicle owned by a small owner is comparatively higher than that of a fleet owner. However, opinions in this matter, are conflicting. There are some who, for valid reasons, hold that a single vehicle operator is able to perform longer mileage and also enjoy a greater degree of economy in the operation. To enable us to lay down principles for determining the size of viable units, based on cost of operation, we prepared a comprehensive questionnaire, eliciting factual data, vide Annexure XI, XII and XIII. These questionnaires were circulated to road transport operators

through the All India Motor Unions' Congress, Indian Roads and Transport Development Association and other Road Transport Association in this country. The questionnaires were also forwarded to all Transport Commissioners, requesting them to distribute copies to actual operators among the various categories *i.e.*, (a) single vehicle operators; (b) operators owning 2 to 5 vehicles; (c) operators owning 6 to 10 vehicles; and (d) operators owning more than 10 vehicles. The response to the questionnaires has not been wholly satisfactory. Even the few replies that were received were not complete. The same questionnaires were also utilised by the Road Transport Taxation Enquiry Committee for obtaining figures of cost of operation from the industry. We also learnt that this Committee had also conducted case studies in respect of 182 selected operators, in Delhi, Kerala, Madras, Maharashtra, Mysore, Orissa, Punjab, U.P. and West Bengal. Statistics on the cost of operation of vehicles owned by different categories of operators were obtained in personal interviews and analysed. These studies are of particular interest to our investigations. It may be useful to quote from the report of the Road Transport Taxation Enquiry Committee in this connection :—

“The cost of operation of single vehicle operators generally ranged from 85.1 paise per mile in Kerala to 125.7 paise in Orissa. The following are the figures of cost per vehicle mile and the average monthly performance of vehicles in these States :

For single vehicle operators

	Cost per mile	Monthly mileage run
Punjab	117.9	1,800
Uttar Pradesh	101.4	3,227
Kerala	85.1	4,167
Maharashtra	87.4	3,584
Madras	93.3	4,667
Mysore	103.4	3,917
Orissa	125.7	2,500
West Bengal	107.0	4,142

“In Punjab and Delhi, the cost was slightly higher and was due to the fact that the vehicles covered under these studies operated under unions and their utilisation was low. In the same State for vehicles covering over 4500 miles, the cost was found to be only 100 paise per mile. Even after making allowance for the difference in monthly mileage, it appeared that the cost of operation was slightly lower in Kerala and Maharashtra. In Maharashtra, although the cost was less than Re. 1 there were certain regions where it was found to be more than Re. 1 a mile. In Orissa, the cost was 125.7 paise per mile for a monthly mileage of 2,500 miles.

“In terms of absolute units, the cost per vehicle mile on account of tyres, maintenance and repairs works out as given below :—

	(In Paise)
Punjab and Delhi	26.8
Uttar Pradesh	19.8
Kerala	24.3
Maharashtra	17.0
Madras	21.2
Mysore	25.5
Orissa	30.6
West Bengal	24.1

"In Orissa, higher costs might be due possibly to the road conditions. In Mysore, the regions surveyed were Mangalore and Mercara, which were hilly tracks and so the wear and tear of tyres and replacements of parts were greater. Comparative costs due to tyres, maintenance and repairs were lower in Maharashtra, U.P. and Madras.

"In the case of fuel consumption, there was no appreciable difference between different States and in a majority of cases, the cost ranged between 32 and 33 paise per mile.

"Operators owning 2 to 4 vehicles each generally appear to be better placed in the matter of operational costs. In Punjab there was a difference of 9 paise per mile in favour of operators owning 2 to 4 vehicles. It was also found that the range of operation in their case extended to 2300 miles as against 1800 miles for single vehicle operators. In U.P., there was also a slight reduction in the costs as these categories of operators could perform 4,275 miles in a month. The extent of utilisations had been slightly higher in this category of operators in many States as can be seen from the following table:—

Operators owning 2 to 4 vehicles

	Cost per mile	Monthly mileage run
Delhi and Punjab	108.6	2,300
Uttar Pradesh	99.0	4,275
Kerala	76.2	6,200
Madras	91.2	4,870
Maharashtra	87.0	3,771
Mysore	99.0	5,150
Orissa	124.1	3,000
West Bengal	104.4	3,750

"There was some reduction in cost for owners having more than 4 vehicles in Delhi, Maharashtra, Orissa and Punjab. It can be seen from the statement appended below that the monthly performance of vehicles owned by this category of operators was higher in Delhi, Maharashtra, Orissa and Punjab."

Operators owning 5 vehicles or more

	Cost per mile	Monthly mileage run
Punjab and Delhi	100.0	4,488
Uttar Pradesh	97.2	4,017
Kerala	92.2	4,500
Madras	94.4	4,243
Maharashtra	111.7	3,667
Mysore	106.5	5,000
Orissa	115.6	4,000
West Bengal	100.0	3,900

"The difference between single vehicle operators and operators owning more than 5 vehicles was 17 paise per mile in Punjab, the highest recorded in the studies. In Madras, there was not much difference. This might be due to the fact that the range of operation was uniformly high irrespective of the size of the operators."

Results of Case Studies

4.9. The case studies show that in quite a number of regions, a single vehicle operator is at a disadvantage as compared to a fleet operator. There can be no precise trends in the cost of operation of vehicles owned between a single vehicle owner and a fleet owner. The road transport costs are peculiar in the sense that two-thirds thereof are in the nature of variable expenses, which have a direct relationship with the type of the vehicle, the type of fuel used, the age of the vehicle, the manner in which the vehicle is run and maintained, the type of pavement, the nature of terrain whether hilly or plain, the nature of commodity carried etc. Though all these factors influence the cost of operation in one way or the other the operator has little control over them. The fact, however, remains that, even though a small operator sometimes performs greater distress mileage, the proportion of effective mileage (which takes into account the load factor), may be less than that performed by a vehicle owned by fleet owner. In other words, the apparently low cost of a small owner may well turn out to be a higher cost when related to a unit of service rendered. It may well be that the total cost of operation for a fleet owner is higher because he has to maintain a bigger establishment, a bigger block capital with the necessary facilities for ware-housing, repairs, servicing, booking etc., in which case the overheads are higher. These expenses are not there in the case of a single vehicle operator who may own and drive his own vehicle. The data collected by the Road Transport Taxation Enquiry Committee makes it clear that the fixed costs are higher for bigger units. On the other hand, the "variable" expenses are comparatively larger for small operators. At any rate, we feel that the cost of operation alone, though very important is not the only consideration on which to base the size of an economic unit. What is more relevant in this behalf is whether a particular unit is capable of creating a reasonable operational surplus. We would like to stress that it is not merely the cost but earnings too which should be taken into account. When these two items are studied together, only then will be true economics of an organisation come to light. For instance, a big organisation may be able to perform, say, 4000 miles per truck in a month but it might incur a relatively larger expenditure on wages and management; this higher cost might be set off by higher freight earnings in the case of big operators. The load factor is higher and the freight rates are also decisively favourable. Such an undertaking will stand to gain by generating larger surplus, as compared to a small owner, who might perform longer mileage, but definitely may not have the same load factor or freight earnings. It has come to our knowledge that big operators, by means of having their own booking agencies, are able to obtain better rates. The rates vary from Rs. 1.50 to Rs. 2 per truck mile and in certain States like Orissa and West Bengal, it is still higher. But single vehicle operators even in these lucrative regions are not able to get even half of this rate. It is, therefore, pertinent to take also the earning potential of the organisation into consideration in determining the size of viable units.

4.10. As stated earlier, a single vehicle operator is always at the mercy of booking agents and is not able to secure adequate freights at all times.

It is this relatively lower capacity to earn for a given unit of service rendered, which is attributed to the institutional position in which a single vehicle operator is placed to-day. We have no doubt that earnings for a given unit of utilisation of a truck are by far less in the case of small operators than a fleet owner.

Hire-Purchase System

4.11. The compelling necessity to accept lower freight rates is to a large extent, also attributable to the present hire-purchase system and the liabilities to which a small operator is subjected. A small operator generally procures a vehicle on hire-purchase basis at an exorbitant rate of interest as he has no other alternative. As soon as he acquires a vehicle, he has to earn continuously to pay off the hire-purchase instalments to the financier on time. Any default in the payment of hire-purchase instalment may lead to seizure of the vehicle. In the circumstances, cost of operation and other economies are of little relevance to the hirer. He goes in for whatever rate is offered and thus perpetuates a chain reaction in the industry. The question of financing the purchase of commercial vehicles on hire-purchase basis and the various disadvantages inherent in the present hire-purchase system have been dealt with by the Study Group on Road Transport Financing. We do not propose to discuss again all the characteristics of motor vehicle financing except to say that it is the small operator in the present set up of the industry who has perpetuated the present hire-purchase charges at 18 to 27 per cent (true rate of interest). As pointed out by the Chairman of the Study Group on Road Transport Financing the road transport industry is not considered as credit-worthy for two reasons. Firstly, the operator is not able to earn sufficient income in the existing conditions of high cost and low freights; and secondly, he has no other security than the vehicle, on which he can obtain credit. A motor vehicle, being a movable property, is not considered as sound security against which loans may be advanced by banks. On the other hand, a big operator, who has plant and machinery or godown or warehouse, in addition to his own vehicles, is able to secure other assets against which he can get comparatively a cheaper credit from banking institutions. In the statements contained in the report of the Road Transport Taxation Enquiry Committee, we find that the cost of operation of a vehicle, attributable to interest (both on loans and operator's own funds) was about 8.5 paise per truck mile. In the case of small operators in Rajasthan, it was slightly higher, namely, 10.7 paise. On the contrary, fleet operators, who have recourse to banks for their credit requirements, incurred only about 4 paise per mile.

4.12. Since a small operator has little capacity to regulate and economise on the cost of operation and since he cannot improve his image in the eyes of the traditional financing agents, there is no other way but to re-organise the industry into economically viable units which would first enable them to improve their operating capacity and also improve their credit worthiness. It is from this stand point that we consider re-organisation of the industry into viable units necessary.

Lack of Facilities for Repair and Servicing

4.13. A single vehicle operator is also subjected to certain inconveniences like lack of service and repair facilities. A sound and economic unit should have its own servicing facility which would enable a vehicle to perform the maximum mileage. It is common knowledge that a new

vehicle, during the first two years of its life, may require less attention than a vehicle which is 4 or 5 years old. The monthly expenditure on account of minor repairs and servicing may be about Rs. 100 for a new vehicle, while a vehicle which is more than 5 years old, may involve an expenditure of more than 500 rupees per month. The same vehicle, if it operates in a hilly terrain, may have to incur at times, an expenditure of Rs. 1000 per month; in these regions, if facilities for repair and servicing are inadequate, the vehicle will have to be kept idle. From the evidence before us, we found that a small operator has to keep his vehicle off the road for at least 4 or 5 days in a month on account of servicing and repairs. However, a vehicle which is run for 25 or 26 days a month, as in the case of a small operator, will become unfit after about five years and may have no resale value. On the other hand, a vehicle with a fleet owner may give satisfactory service for about 10 days and still command a resale value of more than Rs. 10,000. This aspect requires serious consideration. The amount spent on servicing and repairs may be more or less identical in the case of a small operator as well as a fleet owner. But the life expectancy of a vehicle owned by a fleet operator is longer. That is to say, the capital is eaten up quicker in the case of a small owner. A fleet owner will spend more on maintenance of the servicing unit and for keeping his own mechanics and inventories and thus increase his fixed cost. But a small operator with no liability for this additional expenditure will still have to pay an identical sum for repairs, carried out by outside agencies. It is not the cost that matters but the availability of workshop facilities leading to better standards of upkeep of vehicles which is crucial. A small vehicle operator, for obvious reasons, cannot have his own workshop or servicing facilities. It is in this context also that we consider that viable units should be formed.

Non-availability of Spares

4.14. The other disadvantages to the small operators are that they have to pay higher prices for certain scarce items of spare parts, tyres etc. As only bigger units are eligible for import licences for spare parts; this benefit is not available to small operators. Some essential spare parts are not freely available in the market and there have been frequent complaints of profiteering in these items. A big operator is able to get vehicles and spare parts, fuel, tyres etc. at controlled prices. Apart from assured supply, he has the further advantage of getting favourable prices from manufacturers or distributors of these items. The small operator has to pay higher open market prices for tyres and spare parts.

Unreliable Service

4.15. We may also enumerate the other disadvantages, of small operators, which affect the public in general. A big operator is in a position to maintain regular service and instil confidence in the public. A consignor would not like to send his valuable goods through an unknown small operator. He would always count on the services a big operator of repute, as he can claim compensation from him in the case of loss, pilferage or theft of the goods.

Do not adhere to Rules

4.16. It is also possible that a single vehicle operator would not be in a position in several cases to adhere to the rules and regulations. It is

common knowledge that, in order to perform maximum mileage, the small operator disregards the speed limits prescribed for motor vehicles. The small operators work round the clock, and are responsible for a number of road accidents involving loss of life and property. The frequent breakdown of trucks not only cause economic loss but also lead in their wake to a social problem. A small operator has no fixed place of business and, therefore, it is difficult to watch his transactions. It might well happen that a small operator makes default in payment of taxes to Government and also in discharging his obligations to his clients. From this angle also, organisational changes in the industry are called for.

The provision of bigger units is useful to the industry since such units will be able to resist harassment at octroi and other check posts. Small operators are easily prone to harassment which also includes unlawful payments and corruption.

4.17. Another important point in favour of viable units is that organised establishments will respect and observe the various labour rules and regulations. Labour will receive a fair deal at their hands while the service conditions of employees working with small-scale operators leave much to be desired.

4.18. In suggesting the formation of viable units, it is not our intention to overlook the advantages if any, of small-scale operators. These benefits should not be sacrificed in an attempt to form bigger units. All that we wish to stress is that other economies flowing from large-scale operations, which are now denied to single vehicle owners, should be made available to single vehicle operators.

Passenger Transport

4.19. In the fore-going paragraphs, we confined ourselves mainly to the conditions existing in the goods transport sector. The arguments for formation of viable units in this sector apply equally to passenger transport also. However, a single bus owner cannot keep his services to schedule without a spare bus, and to enable him to maintain a spare bus, an owner requires a minimum fleet of five vehicles. It is, in these circumstances, that the passenger transport industry has already seen a certain measure of re-organisation. This process of integration requires to be strengthened further and intensified. The magnitude of the problems existing in this sector is less because of the fact that, at present, more than one-third of passenger transport has been taken over by the State. We also find that, though progressive nationalisation of passenger transport is the accepted policy of Government, yet the necessity to re-organise the existing private operators in this field into viable units may not be as urgent as in the case of goods transport. Nevertheless there are still two-third of passenger vehicles under private ownership. In States like Punjab, Bihar, Kerala, Madras and West Bengal, the role of the private operators is still considerable and, in the interests of travelling public the formation of viable units is also necessary.

Associations of Road Transport Operators

4.20. We now turn to the question of formation of associations of road transport operators and how far these organisations have been effective in discharging their responsibilities in this country. We find that, in certain States, there has been a good net-work of associations both in the field of passenger and goods transport. There are district associations affiliated

to State Association, and above all, there is an All India Organisation to which all the State Associations are, in turn, affiliated. At the All India level, there are only two important organisations, namely, All India Motor Unions' Congress and Indian Roads and Transport Development Association which cater to the needs of the transporters in particular. In addition, some Chambers of Commerce also, to a limited extent, serve the interest of transporters but, by and large, the practical utility of these Chambers is not considerable in so far as individual small transporters are concerned. We find that in some States the associations are not active.

Some of the services which the association should perform are mentioned below :—

- (1) to maintain liaison between Government and transporters;
- (2) secure facilities for import of spare parts, tyres, tubes and other scarce commodities;
- (3) facilities for giving repair and servicing;
- (4) facilities for booking and collecting and forwarding of goods; and
- (5) to secure legal assistance.

Out of these we understand that by and large, the services in items (1) and (5) are being performed by the Associations. However, some Associations of operators in Delhi, Punjab and certain other parts of the country, are also performing a useful service to their members by pooling the available traffic and distributing it among the truck operators on the principle of "first come first served". This eliminates, or at least reduces considerably mutual rate cutting and also increases utilisation by reducing idle time.

4.21. In our Scheme of things, to which we will refer later, where we have recommended the minimum size of a viable unit as 5 for stage carriages and 10 for public carriers, we feel that there still will be a need to foster and recognise such Unions and/or Associations of viable units. Since there will be a large number of such units in every district headquarter and large town, there will remain a need to regulate, if not restrict, mutual rate cutting.

4.22. The Committee on Transport Policy and Coordination has already recommended that it is essential to provide in the legislation for the formation at the State and regional levels of associations of transport operators with specific functions and responsibilities. The Conference of State Transport Commissioners/Secretaries held in July, 1966, to consider the recommendations of the Committee on Transport Policy and Coordination, while considering the reorganisation of road transport industry agreed as follows :—

"The meeting agreed, in principle, that suitable measures should be taken to encourage the formation of viable units of operators in the road transport industry including promotion of transport co-operatives. It was suggested that legislation might be undertaken to provide for the formation of Associations of such operators at the State and Regional levels. It was explained in this connection that a Study Group had been appointed by the Ministry of Transport and Aviation to go into these matters and that the lines on which further action was to be taken would be decided on receipt of this Group's report.

"The meeting also recommended that measures should be taken to provide financial assistance to the road transport industry. Detailed measures would be considered after the report of the Study Group on Road Transport Financing appointed by the Ministry of Transport and Aviation was received."

We recommend, therefore, that suitable action may be initiated to recognise the Associations wherever they exist and to encourage their formation where they do not. Necessary rules for according recognition may be framed under section 47 of the Motor Vehicles Act. We endorse the recommendation of the Committee on Transport Policy and Coordination which desires that such Associations should have both specific functions and responsibilities; we have in the following chapter, described in detail what functions these associations should perform.



सत्यमेव जयते

WHAT IS A VIABLE UNIT

Provisions in State Motor Vehicles Rules

5.1. The earliest definition of "viable unit" was that given in the Madhya Pradesh (then Central Provinces and Berar) Motor Vehicle Rules, according to which, an operator in possession of more than 20 public vehicles was considered to be a viable unit. Similar rules were made by some other State Governments also but the number of vehicles required for a viable unit differed from State to State. A literal interpretation of the provisions of the State Motor Vehicles Rules reveals that stress was laid on the "person" owning the vehicles rather than the pooling of the requisite number of vehicles.

Dictionary Meaning

5.2. The Oxford Concise Dictionary defines 'viability' as the "quality or state of being viable; capacity for living, ability to live under certain conditions". The meaning of the term 'viable' is : capable of living as a new born infant or premature child. Websters Third International Dictionary gives the meaning of 'viable' as capable of living, capable of growing or developing, capable of existence and development as a relatively independent social, economic or political unit.

Ingredients of a Viable Unit

5.3. The definition in the Websters Dictionary gives us a precise concept of viability, which has two fundamental ingredients, namely, (i) capacity to exist; and (ii) capacity to develop. It is worth considering which organisation should be considered as a viable unit in the field of road transport, applying the above criteria. One can hold that a single vehicle owner is capable of existing and also developing his enterprise as there have been several cases in the past where a small operator had, in course of time, acquired a total of three, four or even more vehicles. In the circumstances, his organisation can be taken as a viable economic unit. By the same standards, even a fleet owner having more than 10 vehicles, may lose financially and his organisation may not conform to the requirements of a viable unit. The criterion for considering the viability of a unit should, therefore, be the capability to earn under certain given conditions. In other words, a unit which has lower costs of operation and higher earnings for a given unit of service is to be deemed viable unit. That is to say, the amount of operational surplus should be the guiding principle in the determination of the unit, other things being equal.

Factors Deciding Operational Surplus

5.4. The available surplus, at a given cost, is determined by (i) utilisation of a vehicle; and (ii) prevailing fares and freights. The utilisation of the vehicle is, in turn, depending on the capacity of the vehicle in terms of pay-load, or seating capacity, as the case may be, the load factor/occupancy ratio and distance travelled. The fare and freight rates are determined by the State Governments (in the case of stage carriages) and are influenced by market conditions in the case of goods vehicles. Thus, it would appear

that the factors relating to utilisation of motor vehicles are not uniform and are materially different from region to region and from time to time. We have indicated earlier that the cost of operation also varies according to the type of vehicle, load conditions and road conditions, among other things. In the same manner, even the earnings (operational surplus) change making it all the more difficult to determine whether a particular unit is the most economical in operation. In the light of these observations, we would like to examine the economies of single vehicle ownership *vis-a-vis* fleet ownership to analyse the salient features of road transport enterprise.

Cost of operation Studies

5.5. Some of the studies undertaken in the past into cost of operation of motor vehicles revealed that some small operators had the advantage of lower costs and higher utilisation in certain areas as compared to fleet operators in the same areas. The Transport High Level Committee Report of Kerala supports this view. A few case studies undertaken in Calcutta and Orissa by the Road Transport Taxation Enquiry Committee also indicated such a trend in the cost of operation where a small operator seemed to enjoy certain advantages. However, this should not be taken to mean that such trends are universally true and that it is desirable to encourage small transporters in the road transport industry. For instance, a new vehicle operated by a small owner will, no doubt, be more economical as compared to a fleet owner operating old ones; the cost per vehicle will admittedly be higher in respect of vehicles operated by the latter. On that score, however, it cannot be stated categorically that the industry should consist of only small operators. Difference in economies of scale will be relevant only where all other items of cost and the conditions governing them remain constant. Since a major portion of the cost of operation is contributed by variable factors, any advantage or disadvantage of scale will be obscured by variations in other factors. It is, therefore, necessary to make a scientific survey into the cost of operation of motor vehicles, wherein the size of the unit is the only variable factor and all other factors are constant. Apparently, in some of the studies referred to above, the scientific method has not been adopted.

Difficulties in Assessing Economies of Scale

5.6. There are certain inherent difficulties in determining the cost of operation of motor vehicles in this country. As this industry is dominated by small operators owning one or two vehicles, no proper accounts are maintained by them. The industry is decentralised and is so heterogeneous in character that it is difficult to compare one unit with other, even in the same region, in so far as cost and earnings are concerned. The position becomes worse as a majority of operators are not sufficiently educated to maintain even basic statistics that may enable any Research Organisation to go into the economies of operation.

It is on account of these difficulties that the Road Transport Taxation Enquiry Committee held that the inferences they had drawn from case studies into the cost of operation of motor vehicles should be taken as approximations only which would be useful for purposes of comparative study. The Committee on Transport Policy and Co-ordination also made a pointed reference to this fact when they held that it was necessary to conduct, over a period, a series of investigations into costs (both total and marginal) for specific sections and specific streams of traffic so as to build up data on which dependable policy judgement may be made. In comparing costs, the

report states that it is somewhat risky to generalise on the basis of average costs. It is, therefore, to obtain comparative data on costs pertaining to specific flows of traffic. We are referring to these observations of the Committee on Transport Policy & Co-ordination and Road Transport Taxation Enquiry Committee only to emphasise that it is not safe to generalise on the basis of a few case studies. It has not been possible for us to carry out comprehensive surveys into the cost of operation of vehicles, particularly from the point of view of size of the unit.

5.7. In view of the limitations stated above, we have to go by certain facts which are self-evident; these are :—

- (i) that the cost of acquiring credit is smaller for big operators;
- (ii) that with relatively small management, it is possible to have a larger fleet;
- (iii) that the economy in cost would be greater in the event of having own servicing and repair units which are feasible only for bigger undertakings;
- (iv) that the earnings are larger for bigger units having their own booking agency;
- (v) bigger units can get assured supplies of tyres, spare parts, fuel etc. at more advantageous prices; and
- (vi) bigger units are less prone to pressures and exploitation.

The economies flowing from the above factors are considerable and need no special support from economic surveys.

In the paragraphs that follow, we analyse these factors and try to quantify the benefits in terms of money that would accrue to a bigger unit.

Break-even mileage of a vehicle

5.8. A transport organisation, in order to acquire a reasonable surplus to enable it to exist and to develop, will have to run certain minimum mileage under the prevailing conditions of fare and freight rates. For instance, a vehicle whose cost of operation is 98 paise per truck mile will have to make not less than 3,100 miles per month if it earns an average of 105 paise per truck mile. The profit margin would then work out to Rs. 200 per month and correspond to 18% return on the capital. The following table will be of interest in this connection :—

Estimated cost and income per month of a goods vehicle at different monthly mileages

Monthly mileage	Cost of operation			Earnings @ Rs. 1.03 per mile	Income
	Fixed	Variable	Total		
0	1,394	..	1,394	..	(—) 1,394
500	1,394	256	1,650	515	(—) 1,135
1000	1,394	513	1,907	1,030	(—) 877
1500	1,394	769	2,163	1,545	(—) 618
2000	1,394	1,025	2,419	2,060	(—) 350
2500	1,394	1,282	2,676	2,575	(—) 101
1695	1,394	1,382	2,776	2,776	Nil
3000	1,394	1,538	2,932	3,090	(+) 158

In the illustration given in the statement above, it is assumed that the earning of the truck is at the rate of Rs. 1.03 per mile and the cost (including depreciation and interest at 12% of the price of the vehicle) at 98 paise per mile. A motor vehicle has to pay certain fixed costs like rate of interest, cost of establishment, taxes, insurance and these are not dependent on the utilisation of the vehicle. In other words, these (fixed) costs are incurred by a unit even when a vehicle is not operating. In the circumstances, the vehicle will have to be used to such an extent that the earnings would cover both the fixed and variable costs. In the illustration given above, when the vehicle makes 2,695 miles per month, the cost equals the earnings; and the vehicle begins to earn beyond 2,695 miles a month when the freight rate remains at Rs. 1.03 per truck mile. This break-even point will be still higher if the freight rate is less than Re. 1 per mile, which is the prevailing position in many States in this country. In such cases, a vehicle will have to cover even upto 5,000 miles per month if the owner has to make his unit profitable. As an operator has hardly any scope for economising on the cost of operation and has little control over the prevailing freight rates, it is necessary for him to maximise his mileage and earn sufficiently to set off the cost and obtain a surplus. It appears from the surveys conducted by the Road Transport Taxation Enquiry Committee that an average operator in this country would have to run not less than 4,500 miles per month at the prevailing freight rate conditions if such a unit were to exist and also to develop. The question now arises whether a single vehicle operator will be in a position to do this mileage in a month and, if so, what is the establishment required by him, if he were to take normal precautions and adhere to the requirements of law in matters like speed of vehicle, hours of work of his employees, extent of load carried etc.

Normal performance of a truck

5.9. Some case studies were conducted in 1966 on some important routes to get an idea about the number of detentions encountered by trucks and the average distances covered by them in an hour. The results are as under :—

Route	Total distance	Average distance covered in an hour by a truck
	Kilometres	Kilometres
Delhi-Kanpur	430	14
Lucknow-Delhi	512	9
Bangalore-Mangalore	400	9
Mangalore-Bangalore	400	9
Delhi-Bombay	1,410	20
Delhi-Calcutta	1,440	20
Delhi-Dholpur	253	32
Bombay-Poona	184	25
Bangalore-Bombay	1,072	15
Bombay-Bangalore	1,072	19
Bangalore-Secunderabad	880	12.6
Secunderabad-Bangalore	880	20

Minimum hours of work of vehicle to be employed and cost of labour

5.10. Taken as a whole, the average distance covered by a vehicle in an hour works out to 18 Kilometres or 11 miles. Such a poor performance of vehicles is a fact, though it may appear unbelievable and is mainly due to innumerable detentions *en route*, at several check-posts like, octroi, sales-tax, police, civil supplies and various other enforcement by State and local-bodies alike. At this rate, if a vehicle requires to make 4,500 miles per month (corresponding to 150 miles per day without taking into account the weekly off), a vehicle will have to be on the road for 14 hours a day. Having regard to the time needed for loading and unloading processes and such other duties like servicing etc., a truck will have to be necessarily employed for 16 hours a day along with its driver. It is thus apparent that it is not possible for a single vehicle operator to employ his vehicle economically unless he has always two drivers and two cleaners for a truck. If weekly offs are to be provided, even two drivers per truck will not enable the vehicle to perform 4,500 miles a month; in that case 3 drivers per truck will be necessary. With the owner looking to the managerial business, the truck requires a minimum of four persons to keep itself running. The wage bill even for these four persons (two drivers and two cleaners) works out to between Rs. 600 to 800 per month (including bhatta).^{*} With such heavy establishment costs, the amount of profits earned by a single vehicle operator will be negligible. The experience in Madras State is that every truck is employed with two drivers, one of them being the owner himself. Where the owner does not drive, he has to engage two drivers; and in the above mentioned State the average performance of a truck is about 200 miles a day. It is only in such conditions that a single vehicle unit can exist, and that too, by violating load and speed restrictions and disregarding labour etc. laws. As against this, there are certain States where a single truck has only one driver and one cleaner, but in such cases, it will not be possible for the vehicle to run, on an average, even 100 miles a day. There is evidence to show that in certain States, like Orissa, the average turn round of a vehicle is less than 100 miles a day and, in Rajasthan, the average daily run of a stage carriage is less than 50 miles a day which *prima facie* show that such operations are uneconomic and the organisations concerned may sooner or later disintegrate unless the prevailing freight rates are uniformly higher than Rs. 2 per mile. We are trying to establish here that a single vehicle owner will have to incur a larger expenditure on his wage bill if he wants to make his unit economic. The large number of single vehicle operators in this country is not indicative of a sound state of affairs in this industry. They cannot exist, leave alone have the capacity to develop, if they were to adopt healthy trucking practices. On the other hand, we have also seen a fleet owner having 5 vehicles making a reasonable profit with only 7 drivers.

Saving in Labour Cost

5.11. On the analogy given above, it would appear that 10 operators of vehicles, each owning one truck, will require 20 drivers and 20 cleaners which alone can enable them to make 4,500 miles per truck per month. On the other hand, a fleet owner having 10 vehicles can perform the same mileage with 14 drivers and 14 cleaners. This is a clear saving available to

^{*} Travelling Allowance.

a fleet owner. Further, the employees would get a fairer deal from the management operating 5 or 10 vehicles. In this connection, it will be pertinent to mention about certain labour laws regarding the hours of work of drivers etc.

Motor Transport Workers Act, 1961

5.12. The Motor Transport Workers Act, 1961, lays down that "no adult motor transport worker shall be required or allowed to work for more than 8 hours in any day and 48 hours in any week" (Section 13). It also stipulates in Section 15(1) that "the hours of work in relation to adult motor transport workers on each day shall be so fixed that no period of work shall exceed five hours and that no such motor transport worker shall work for more than 5 hours before he has had an interval for rest for at least half an hour". Section 16(1) lays down that the rest of an adult motor transport worker shall..... be so arranged that inclusive of interval for rest..... they shall not spread over more than 12 hours in any day". The expression 'hours of work' includes the time during which a motor transport worker is at the disposal of the employer or of any other person entitled to claim his services and it includes (i) the time spent in work done during the running of transport vehicle; (ii) time spent in subsidiary work; and (iii) periods of mere attendance at intervals of less than 15 minutes. The term 'subsidiary work' includes loading and unloading and work in connection with the upkeep and repair of the transport vehicle. Section 3 of the Act requires the management to provide facilities for rest-houses or such other suitable alternative accommodation at all places wherein motor transport workers are required to halt at nights. There are also provisions empowering State Governments to make rules in regard to uniforms for workers, payment of wages and leave salary, provision of medical and first-aid facilities, payment of extra wages for over-time etc. We have referred to these provisions of the Motor Transport Workers Act to show that none of the facilities indicated above would be available to workers of operators owning one or two vehicles each, even where they are covered by the provisions of the Act. It has come to our notice that, in order to escape the liabilities under the Act, even bigger units having 10 vehicles each have split up into partnership concerns, each having two vehicles. It is not our purpose to go into the merits of these provisions of the Motor Transport Workers Act which appear to be desirable and necessary to prevent fatigue to drivers and thus help minimise accidents. What we would emphasise is that a small unit in the road transport industry cannot observe even the spirit, let alone the letter, of the legislation under existing conditions of high cost and low earnings. At any rate, if the small organisations are required to adhere to the Motor Transport Workers Act and Payment of Wages Act, they will not be "self-generating" and will deteriorate sooner than necessary under the prevailing conditions. However, a viable unit meaning a unit consisting of say 5 or 10 vehicles, will be in a position to observe the provisions of the Motor Transport Workers Act and still obtain a reasonable operational surplus.

5.13. We have had the benefit of perusing a paper submitted by one of our colleagues entitled "A study of the cost of operation of transport vehicles as a determinant of the need for and of the size of viable units" which is reproduced in the Appendix. Relevant extracts from this paper,

which explain the degree of saving in cost on account of labour, establishment and workshop, are reproduced below :

"One way open is for the industry to help itself by having larger units which help to reduce the over-head expenditure on management and staff, leave and off-duty salaries for drivers and reduction in the overall strength of drivers and cleaners. By having at least a minimum fleet of 5 vehicles it will be possible to effect a saving of not less than Rs. 5,000 in the running cost per year per vehicle. The rationale behind this is as follows :—

For one vehicle.....2 drivers are necessary
 For two vehicles.....3 drivers are necessary
 For three vehicles....5 drivers are necessary
 For four vehicles....6 drivers are necessary
 For five vehicles....7 drivers are necessary

"This applies to the number of cleaners also. As far as office and garages are concerned, whether there is one vehicle or five vehicles, the management and staff would be the same, that is, in other words, whether the strength of the fleet is one or five, managerial expenditure would be constant. The saving by way of these would be Rs. 2,400 per vehicle. As a result of increase in the number of vehicles in the fleet, not resulting in increase in the strength of drivers in direct proportion, it being almost an arithmetical progression, the saving would come to about Rs. 1,500 per vehicle. Saving in leave salary, batta of drivers and cleaners, provident fund contributions and other administrative charges would be about Rs. 1,100 as a result of employing 7 drivers and 7 cleaners for 5 lorries instead of employing two drivers and two cleaners per lorry. . Thus there would be a total saving of Rs. 5,000 per year."

Saving from Workshop Facilities

"A single vehicle owner will have no capacity to own a workshop nor will such a workshop be economical, if it services one vehicle only; it, therefore, requires minimum number of vehicles in order to keep itself fully engaged. The maintenance of a garage with certain minimum workshop facilities would go a long way to reduce the cost of repairs and expenditure on fuel and tyre and would also reduce the number of days the vehicles will have to be off the road due to breakdown etc. In a fleet of 3 to 4 lorries, the cost of investment and expenditure on maintenance for garage would be completely balanced by the saving effected in repair and maintenance charges. This would also have the effect of reducing the idle vehicle hours and increasing vehicle utilisation thereby contributing to the establishment of a higher degree of efficiency in the transport organisation. The garage and workshop would be utilised to the maximum extent possible if 10 vehicles are attached to the garage. The over-all saving, even after meeting all the expenditure on the garage, would be Rs. 4,150 per truck per year. So the cumulative saving (saving consequent on pooling of drivers and cleaners and provision of garage facilities) would be about Rs. 9,150 per annum."

The paper seeks to prove that, on account of savings effected from labour and workshop alone, the surplus would be of the order of Rs. 750 per month per vehicle. In other words, if a single vehicle can earn a profit of Rs. 200 per month under the management of a single vehicle owner, a fleet operator owning 10 vehicles would be in a position to earn an additional Rs. 780 per month per vehicle. Added to this, there are economies that could be realised from cheaper credit facilities available to big undertakings from banking institutions.

5.14. We feel that the economies of large scale operation have been some what over-emphasised in the above study. Based on the data furnished, the savings for a unit of 5 or 10, as the case may be, increased from Rs. 200 to Rs. 980 per month. We feel that the economy of this scale may not be available in all parts of the country. We should take a realistic and conservative view of the savings that are likely to be generated and, in our opinion, the savings that would accrue may be less.

Savings from interest charges

5.15. As stated earlier, a single vehicle owner has generally no access to institutional sources of finance. He acquires his vehicle through hire purchase finance companies at rates which vary from 10% to 15% (flat) for new vehicles. The effective rate of interest would be more or less double the hire purchase charge. At present, the effective hire purchase charges are not less than 18% whereas a big undertaking can obtain credit from banks at 9% to 11% time rate of interest. The saving for a bigger unit which can offer security will be of the order of Rs. 150 per month. The net saving on account of labour, workshop and interest etc. may work out at Rs. 400 per vehicle per month. That is to say, the capacity to save between a single vehicle owner and a person having say 10 vehicles will be more than double.

Earnings from booking agency

5.16. The operational surplus will be still larger if we take into consideration the variations in freight rates. It is a fact that a bigger undertaking is always able to attract higher freights for its services than a single vehicle owner. As stated earlier, a single vehicle owner is compelled to accept whatever rate is offered to him by the booking agent because he is under obligation to pay off the hire purchase instalments to the finance company, as in the event of default in payment, his vehicle is liable to be seized. A bigger operator, who faces no such risk, is able to command a better freight rate. There is a considerable margin between the freight rates charged by big operators having their own booking agencies and small operators who have no such facility. The big operators usually charge Rs. 1.50 to Rs. 2 per truck mile for their services, while small operators are prepared to offer their vehicles at rates varying from 75 paise to Rs. 1.25 paise per truck mile. If an operator also has his own booking agency, the savings accruing to him would be larger. A single booking agency would be in a position to give its owner a profit of Rs. 1,200 per month after meeting establishment charges. A small booking agency will be in a position to provide services to say ten trucks at a time which means that an operator owning ten vehicles can profitably have his own booking agency (which has to be at the place of origin and destination).

Viable units in passenger transport services

5.17. We have all along referred to the economies of goods transport operation; this is because there is imperative need for encouragement of

viable units in the field of goods transport as this is the only way to enable the small operators to have larger operational surplus and encourage them to make further investment in the industry. There is not much difference between the economies of goods operation and passenger operation except that, in the case of the latter, the fare rates are fixed by Government and there are no fluctuations on account of the vagaries of the market conditions. There are also no middlemen in this business. As the State Government has greater control over the operation of passenger vehicles by way of restricting the permits and trips to be made to the required number, the timing of schedules etc. passenger service units cannot influence the earning very much. The flow of traffic on a particular route is generally known. Nevertheless, a viable unit has the advantage of catering to an efficient service which will largely go in its favour than a unit having a single vehicle. In the field of passenger transport, unless the services are regular and efficient, the public will not patronise them. For this, a spare bus is absolutely necessary. It is impossible for a single vehicle owner to have a spare bus. It is from this point of view that encouragement of viable units in the passenger sector also is necessary. As in the case of goods transport the savings on account of labour and workshop will be available to passenger sector also.

Conclusions

5.18. We are of the view that a bigger unit will achieve better economy than a single vehicle owner and such a unit will be more efficient and provide better services to the public. Since we are required to lay down the minimum strength of a viable unit, which is necessary to promote economy in the provision of services, an attempt has been made to show that a bigger unit will have greater capability to earn and save as compared to a single vehicle operator in quantitative terms. If a single vehicle owner, in a given set of conditions, can earn a certain amount of profit, the same vehicle attached to a viable unit will be able to earn three times this profit.

Optimum Unit

5.19. We have not considered it necessary to indicate the optimum size of a unit, as there can be no hard and fast rule for determining this in the road transport industry. What is optimum for one region may not necessarily be so far another. Similarly, what is considered as an optimum size at one time may cease to be so later. In our view, a unit which is capable of having its own workshop and its own booking agency should be considered as viable. A unit which can sustain these two services will not only be able to exist but also generate more funds for being ploughed back into the industry. It will thus be in conformity with the requirements of a 'viable unit', namely, that it will acquire the capability to exist and also to develop as a relatively independent economic unit.

SCHEME FOR VIABLE UNITS

6.1. In this Chapter, we propose to indicate our views about the size of viable units and the incentives necessary for the promotion of such units. Viable units are necessary for accelerating the tempo of growth in the road transport industry consistent with the economic development of the country.

Size of a Viable Unit

6.2. We recommend that the road transport industry should be re-organised on a rational basis. To obtain the maximum advantages enumerated in the preceding chapter, we consider that a viable unit should consist of at least ten vehicles in goods transport and five stage carriages, with a spare bus in the case of passenger transport. For an undertaking running passenger services, the maintenance of a reserve bus is desirable, as without such an arrangement, it will not be possible for the organisation to provide dependable service to the public. As we have indicated earlier, many States have laid down a provision for maintenance of a spare bus although the fleet requirement for spare bus differs from State to State. Some State Governments have prescribed one spare bus for every 5, some one for 7 and some others one for 10 and so on. We feel that there should be a uniform basis of one spare bus for every five stage carriages.

We do not recommend a spare truck for a goods transport viable unit. Since public carriers are not usually employed on scheduled services, it appears unnecessary to provide for maintenance of a spare vehicle by units engaged on goods transport. In recommending the above size of a viable unit for stage carriages, we have taken note that, on an average, a stage carriage will do 36,000 miles a year.

Types of Viable Unit

6.3 In our scheme of things, a viable unit can be :—

- (a) of an individual,
- (b) a proprietary or partnership firm,
- (c) a joint stock company, public or private,
- (d) a registered cooperative society, including a service cooperative,
- (e) an association of vehicle owners, to be duly registered under law/rules to be framed for the purpose, if necessary.

Test of Viable Unit

6.4. The test of a viable unit in our scheme is that it should have, (i) a Central or unified organisation; (ii) provide facilities for booking of goods and passengers and (iii) provide repair, servicing and other facilities. Such a viable unit should be recognised under the Motor Vehicles Act.

Viable Units vs. Permits

6.5. In the evidence before us, it was suggested that a viable unit should be granted permits in its name without which it might not be able to exercise effective control over vehicles affiliated to it. We have given careful con-

sideration to this matter. While we agree, in principle, with this proposition, considering the very large number of single operators who have to be persuaded to form into viable units it may not be realistic to insist on permits being issued in the name of the association at this stage. Efforts should now be made to bring together the small operators by offering incentives. The Group recommends that incentives should be in the nature of a 10% rebate in the motor vehicles tax for members of newly formed viable units for a period of 5 years, preference in the matter of counter-signatures and grant of temporary permits, rebate in insurance premium, the same facilities which are available to big fleet owners regarding supply of tyres should be available to a viable unit including an association, availability of spare parts at controlled prices, preference in licensing of booking agents, grant of import licences for spare parts, facilities for building workshop and warehouses, and credit facilities through financial institutions.

How to organise Viable Units of single vehicle operators

6.6. In conformity with our recommendations, persons, owning ten trucks or five buses in the aggregate, can join together and form an Association, to be duly registered, for providing servicing and repair facilities, making arrangements for booking and forwarding of goods and such other functions which will ensure more efficient services. Every such Association should be a registered body and should discharge all such duties as may be prescribed by the State Governments. These Associations should also maintain proper records and accounts of the goods booked, freights charged, commission earned etc. by individual member operators. In such a set up, the proprietary rights over the vehicles will continue to remain with the owners of the vehicles and will not vest in the Association. In the same way, the permits will also remain with the member-operators, while the Association stands as an independent organisation giving service facilities to its affiliated members. Although such an Association will not itself be a viable unit, the members thereof will be considered as members of a viable unit and would be entitled to the same facilities and incentives as any other viable unit. These arrangements will involve a major departure from the schemes of viable units now in force in some of the States because the individual operators will not be asked to add more vehicles to their fleet nor will they be asked to possess proprietary rights and control over the vehicles in question, though they will have facilities of large-scale operations in spite of having a single vehicle each. The Association, however, will have operational control over the fleet.

Right of operators to secede from viable unit

6.7. If, for any reason, any member of a viable unit is dissatisfied with the working of the unit, he may secede from that particular unit and join another unit in the area. However, we would recommend that a member-operator should not be allowed to exercise this option oftener than once in a year.

6.8. It is also essential that an owner of a vehicle should be a member of only one viable unit at a time. It is desirable too that the owners who get the vehicles registered in a particular district, enroll themselves as members of viable units in the area. In other words, owners of vehicles registered outside the district/State and, which operate occasionally in another area, should not be shown as members of a viable unit of the area in which they do not operate normally.

Service Co-operatives

6.9. Small operators can also make their services viable by forming themselves into service cooperatives societies as in the case of associations. Such societies have already been formed in which the individual owner does not lose his identity and, at the same time, gets advantages like actual users' import licences.

Viable Units on voluntary basis

6.10. We would strongly urge that no compulsion should be used by State Governments to form viable units. These units should spring up voluntarily or spontaneously. Persons interested in joining viable units, so as to obtain certain benefits, which would not be available to them otherwise, should have all the facilities to form such units. On the other hand, if any operator is not willing to join such a unit he can continue to exist in the trade. However, we would plead that, in the interests of proper development of road transport, it is desirable that Government should take steps to educate small operators on the desirability of formation of viable units. If, in spite of the incentives, a single vehicles operator is not willing to join a viable unit, he will be allowed to continue to function.

Effect of tax subsidies

6.11. We consider that State patronage for the re-organisation of road transport industry is necessary, at least to a certain extent, in the initial stages. We, therefore, recommend tax concession in the form of subsidy equivalent to 10% of the amount of motor vehicle tax. This will not result in any diminution in the State revenues. The present revenue from motor vehicle tax is estimated to be of the order of Rs. 70 crores in the country, the share from commercial vehicles alone being Rs. 60 crores. 10% of this revenue would mean Rs. 6 crores. Perhaps, the share of each State may not exceed Rs. 50 lakhs per annum on average. It seems to us that the State Governments may afford to sacrifice revenue to this extent in the larger interests of the road transport industry. We have stated earlier that the amount of turn-over by brokers in this country may be of the order of Rs. 400 crores per annum. The re-organisation of the road transport industry on the lines, suggested above, is expected to bring 50% of the goods booking work within the purview of viable units. Assuming that 20% of the value of business handled by organised booking agencies represents the net surplus or profits of these units, the amount available to them would work out to Rs. 40 crores per annum. In other words, as against a sum of Rs. 6 crores, which might have to be expended by the State Governments by way of subsidies to viable units, the industry would gain additional profits to the extent of Rs. 40 crores per annum. Assuming that one half of this additional profit is ploughed back into the industry, there will be an in-built demand for 4,000 vehicles per annum. An increase in the number of motor vehicles of this order will, in turn, bring additional revenues which will outweigh the losses which the State Governments may suffer in the beginning. The scheme of tax subsidy that we have sponsored will not really result in diminution of State resources; in due course it would increase their revenues on account of accelerated development of road transport industry.

Role of Associations

6.12. We visualise that, if our recommendations are implemented, at least 20 viable units will spring up in each district. In order to have proper

liaison between viable units and Government, it is necessary to form associations of road transport operators at district level, to begin with. We recommend, therefore, that in each district, road transport associations should be formed, to which viable units may be affiliated. All such district Associations should, in turn, be affiliated to a State Association and State Associations may, likewise, be affiliated to an All India Road Transporters' Associations. That is to say, operators should find themselves associated not merely at the district level but should also find their way to national levels. The cause of road transport will be served better if the industry is suitably organised so that the operators are able to ventilate their grievances and seek redress in an effective manner through the forum of the associations. These associations should also play an active role in protecting the interests of their members. We have already referred to the need for statutorily recognising these units and implementing the recommendations of the Committee on Transport Policy and Coordination in our earlier Chapter.

Nationalisation of road transport

6.13. We understand that progressive nationalisation of passenger road transport services is the accepted policy of Governments and that nationalisation of such services is proceeding on a phased basis. There are some States, like Gujarat and Maharashtra, where nationalisation of passenger services is near complete. In other States, the extent of nationalisation is comparatively less. On the whole, about 30% of the passenger services is in the public sector, at present.

Goods transport is almost entirely in the hands of private operators now. The Committee on Transport Policy and Coordination has recommended that State Governments should make a beginning in the operation of goods transport services. This, according to the Committee, would not amount to nationalisation, but merely an attempt to forge a necessary instrument for strengthening the road transport industry as a whole and achieving co-ordination between different modes of transport in the interest of national economy.

It seems to us that it may not be possible for the State Governments to find adequate resources, in the foreseeable future, to completely nationalise passenger services and make inroad in the field of goods transport. Nevertheless, there is a fear lurking in the minds of private operators that they will be thrown out of business, because of impending nationalisation. Consequently, they are reluctant to invest heavy amounts in the road transport industry. In order to remove this fear of the operators, we would suggest that the State Governments and Administrations of Union Territories should decide the extent to which the passenger transport services provided by the private sector are inadequate and require to be supplemented in the public sector, and also draw up and publish their time-schedules of nationalisation of passenger transport. Likewise, they should also examine whether it is necessary to enter the field of goods transport and, if so, formulate specific schemes in this regard for inclusion in the plans. If this is done, operators will know where exactly they stand vis-a-vis nationalisation and will be encouraged to invest in the road transport industry because they will have the certainty that they will not be dislodged from their present business for a reasonable period.

Viable Units of taxis

6.14. In regard to taxi operation, we do not propose to spell out any specific scheme for formation of viable units because this trade is mostly

confined to cities and bigger towns where the operators have ready workshop and other necessary facilities. Further, the taxi fares are revised, from time to time, by the State Transport Authorities to ensure that the increase in the general cost of living does not eat into the profitability of taxi operations. In the circumstances, we do not propose to make any recommendation in this behalf.

6.15. Before we conclude, we would like to make some observations in regard to follow-up action on our recommendations. Although several bodies went into different aspects of the road transport industry in the past and made several important recommendations, we find that there has been very little by way of practical implementation. It appears to us that one of the reasons for this situation is the absence of a suitable agency at the Centre to review the progress of action on the recommendations of the various bodies. We would, therefore, suggest for the consideration of the Ministry of Transport & Shipping that they may set up a separate implementation and evaluation cell under them to watch and review follow-up action on our report and also of the reports of the other expert bodies appointed from time to time.



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SUMMARY OF MAIN CONCLUSIONS AND RECOMMENDATIONS

1. Road transport has a number of advantages. It is speedy, efficient, flexible and offers door to door service. By virtue of its ability to penetrate into the remotest parts of the land, at comparatively very low capital cost, mechanised road transport is best suited to break through the barriers of isolation and consequent stagnation in underdeveloped countries. (Para 1.1).

2. Though several attempts were made by Governments to bring about proper organisation of road transport industry, these have not yielded the desired results as the issue was viewed from the angle of rail-road co-ordination (Para 1.2).

3. During the post-war period, several State Governments used compulsion as well as persuasion to organise individual operators into bigger units (Para 1.7).

4. For the first time, the Planning Commission emphasised the need for formation of viable units in goods transport in 1954. They recommended that incentives should be given to viable units of goods vehicles by granting them permits for periods of five years. (Para 1.8).

5. In pursuance of the recommendation contained in the first Five Year Plan, some State Governments introduced rules in their Motor Vehicles Rules for preference to viable units in grant of permits. (Para 1.9).

6. Side by side with all attempts for reorganisation of road transport industry into bigger units, permits were also issued liberally without regard to size or number of vehicles owned by the persons concerned. This position continues even today. (Para 1.18).

7. There is a mis-apprehension among some sections of public that viable units are favoured in the country in order to oust the small operators from the business. (Para 1.18).

8. The provisions of the Income Tax Act and the Motor Transport Workers Act are not such as to encourage the formation of viable units. (Para 1.18).

9. Road transport industry, unlike other service industries, has some peculiar features; it is highly decentralised and is generally comparable to small scale industries with the difference that it is capital intensive. This is one of the reasons why it is dominated by small owners. (Para 2.15).

10. None of the organisations or persons, who tendered evidence before us, gave a precise definition of an optimum road transport unit on the basis of cost and operational results. The views expressed by them were not supported by facts. (Para 3.1).

11. The position varied from State to State in regard to the concept of a viable unit, the incentives available to them, the degree of success in Government's policies, the present stage of development, the recent trends in dissolution of viable units, the economic benefit of such units etc. (Para 3.2).

12. Punjab is the only State which gives a 10% concession in motor vehicles tax to bigger units owning more than 10 vehicles, in addition to preference in the grant of permits to viable units. (Para 3.3).

13. In some of the Southern States, the bigger undertakings have to maintain spare buses which are not subjected to motor vehicle tax. (Para 3.3).

14. According to State Governments, there was some measure of success in the formation of viable units in Madhya Pradesh, Madras, Manipur and Tripura. In other States, there has not been any significant improvement. Small owners* constitute 98% of the total even now. (Paras 3.4 to 3.6).

15. In spite of an impressive growth of road transport in this country over the last 15 years, the rate of development has not been commensurate with the requirements of the economy. In respect of 22 industries (including transport equipment) for which growth indices are available for the years 1955-56, the rate of growth of transport equipment industry' is less than that in 16 other industries during the same period. (Para 4.2).

16. On the basis of the existing statistical data and the findings of the Planning Commission, it may appear on the surface that there are conditions of 'sellers market' in the road transport industry—a situation which is conditioned by shortage of transport supply and higher prices for transportation. But in practice, this is far from true, particularly in the case of the trucking industry. (Para 4.2).

17. In spite of the admittedly lower transport capacity and considerable increase in prices of all commodities in general and motor vehicles, motor vehicles components and motor fuel, in particular, the prevailing freight rates have not increased to the same extent; in certain regions, they had, in fact, declined. This situation needs to be corrected. (Para 4.2).

18. The uneconomic levels in transport prices can be attributed to the disorganised state of the industry which is dominated by small owners. (Para 4.5).

19. It is reasonable to believe that we have in this country a large number of booking agents, running into thousands, the majority of whom do not have vehicles of their own. There are many disadvantages of such booking agents. Their methods of working are irrational, arbitrary and lead to exploitation of small operators. (Para 4.6).

20. It is estimated that the annual turnover of freight charges collected by booking agencies in this country is of the order of Rs. 400 crores. An important sector of this industry is so far not subjected to any control either by the State or by the Centre. (Para 4.7).

21. There is imperative need to control booking agencies and bring them under a measure of discipline. (Para 4.7).

22. Licensing of booking agents, by itself, will not yield the desired results. We recommend that uniform model rules should be drafted spelling out details of licensing, accounting, hours and place of business, terms on which load may be offered to transporters, commission to be charged, vouchers to be used, the records to be maintained, the minimum number of vehicles to be owned, provision of storage facilities liability against pilferage, theft or loss of goods etc. (Para 4.7).

*The expression "small owner" refers to owners having 1 or 2 vehicles.

23. It is desirable that the working of booking agencies is gone into in greater detail to enable the drafting of guidelines for regulation of this sector. (Para 4.7).

24. No precise trends can be drawn in the matter of cost of operation of vehicles as between a single vehicle owner and a fleet owner due to various reasons. Road transport costs are peculiar since two thirds thereof are in the nature of variable expenses. (Para 4.8).

25. Economy in operational cost though very important is not the only guiding factor for determination of a viable unit; it is the net operational surplus which is more relevant for this purpose. (Para 4.9).

26. The net earnings for a given unit of utilisation of a truck are less in the case of small operator than in the case of a fleet owner. (Para 4.10).

27. Since a small operator has little capacity to regulate or economise on the cost of operation and since he cannot improve his image in the eyes of the traditional financial agencies, there is no escape to organising the industry into economically viable units. This would improve the operating capacity as well as credit-worthiness of operators. (Para 4.12).

28. The life expectancy of a vehicle owned by a fleet operator is greater because of preventive maintenance. A small owner cannot afford to have workshop or servicing facilities of his own. For this reason also, viable units are necessary. (Para 4.13).

29. Small owners find it difficult to obtain spare parts at controlled prices. Apart from assured supply, a big operator has the advantage of getting favourable prices from manufacturers or distributors of these items, especially tyres. (Para 4.14).

30. The transport services by small operators are unreliable. Generally, they do not adhere to rules. They have no fixed place of business. It is, therefore, difficult to watch their transactions. Under compulsion, they work round the clock and are easily prone to accidents. Small operators suffer frequent harassment and exploitation at octroi and other check-posts (Para 4.16).

31. In spite of Government's policy of nationalisation of passenger services, formation of units in this field should be encouraged. (Para 4.19).

32. The growth of associations in road transport industry has not been uniform. In a few States, the associations are not active. On the other hand, in some other States, they are found to be well developed and serve a very useful purpose. (Para 4.20).

33. Some of the services which the associations should perform are :

- (i) to maintain liaison between Government and transporters;
- (ii) secure facilities for import of spare parts, tyres, tubes and other scarce commodities;
- (iii) facilities for giving repair and servicing;
- (iv) facilities for booking, collecting and forwarding of goods; and
- (v) to secure legal assistance. (Para 4.20).

34. There is need to foster and recognise unions of motor vehicle operators or Associations of viable units. Since there will be a large number of such units in every district headquarter and large town, the need to regulate, if not, restrict, mutual rate cutting cannot be over-emphasized. (Para 4.21).

35. Suitable action may be initiated to recognise the associations of roads transport operators wherever they exist, and to encourage their formation, where they do not. Necessary rules for such recognition may be framed under section 47 of the Motor Vehicles Act, 1939. (Para 4.22).

36. Such associations of road transport operators should have both specific functions and responsibilities. (Para 4.22).

37. A literal interpretation of the provisions of the State Motor Vehicles Rules reveals that, in defining a viable unit, stress was laid on the persons owning vehicles rather than pooling of the requisite number of vehicles. (Para 5.1).

38. A viable unit is one which is capable of existence and development as a relatively independent economic unit. (Para 5.2).

39. A viable unit in road transport industry should have lower cost of operation and higher earnings for a given unit of service. (Para 5.3).

40. The operational surplus, at a given cost, is determined by utilisation of vehicles and prevailing fare and freight rates.

41. According to a few studies undertaken in the past, it appeared that some single vehicle operators enjoyed economy in cost. This cannot, however, be said to be universally true. Differences in economy of scale are relevant only when all other items of cost and conditions governing them remain constant. Apparently, in these studies, the scientific method had not been adopted. (Para 5.5).

42. There are certain facts which are self-evident. These are : (i) that the cost of acquiring credit is smaller for big operators; (ii) that with relatively small management, it is possible to have a larger fleet; (iii) that economy in cost would be greater in the event of having own servicing and repair units which are feasible only in the case of bigger undertakings; (iv) that the earnings are larger for bigger units having their own booking agencies; (v) that bigger units can get assured supply of tyres, spare parts, fuel etc., at more advantageous price; and (vi) that the larger units are less prone to pressures. (Para 5.6).

43. Transport vehicles will have to run a certain minimum mileage, if an enterprise is to exist and develop. (Para 5.10).

44. If a vehicle is to be economically employed, it requires at least two drivers and two cleaners. (Para 5.10).

45. The operation of buses, which perform fifty miles a day are, *prima facie*, uneconomic and the organisations concerned may sooner or later disintegrate. (Para 5.10).

46. The large number of single vehicle operators in this country cannot exist, leave alone, have the capacity to develop, under the prevailing freight rates, if they adopt healthy trucking practices. (Para 5.10).

47. A small unit in the road transport industry cannot observe either the spirit or the letter of the provisions of the Motor Transport Workers Act, 1961, under existing conditions of high cost and low earnings. However, a viable unit, owning 5 or 10 vehicles, will be in a position to comply with these provisions and still obtain a reasonable operational surplus. (Para 5.12).

48. The capacity to save between a single vehicle owner and an owner having, say, ten vehicles will be more than double. (Para 5.15).

49. A motor vehicle has a potential to earn more profit if the enterprise to which it is attached has booking facilities. (Para 5.16).

50. A transport unit which can maintain a booking agency and a workshop will not only be able to exist but also generate more funds for being ploughed back into the industry. It will thus be in conformity with the requirements of a viable unit, namely, capability to exist and also to develop as a relatively independent economic unit. (Para 5.19).

51. We recommend that the road transport industry should be re-organised on a rational basis. To obtain the maximum advantages, we consider that a viable unit should consist of at least 10 vehicles in goods transport and 5 stage carriages with a spare bus in the case of passenger transport. We do not recommend a spare truck for viable unit in goods transport. In recommending the above size for stage carriages, we have assumed that a stage carriage will do 36,000 miles in a year. (Para 6.2).

52. In our scheme of things, a viable unit can be :—

- (a) of an individual
- (b) a proprietary or partnership firm.
- (c) a joint stock company, public or private
- (d) a registered cooperative society, including service co-operatives
- (e) an association of vehicle owners to be duly registered under law/rules to be framed for the purpose, if necessary. (Para 6.3).

53. The test of a viable unit in the goods transport field is that if it should have (i) Central or unified organisation of any character; (ii) provide facilities for booking of goods and passengers; and (iii) provide repair, servicing and other facilities. (Para 6.4).

54. We agree, in principle, with the suggestion that a viable unit should be granted permits in its name without which it might not be able to exercise effective control over vehicles affiliated to it. However, considering the very large number of single operators who have to be persuaded to form into viable units, it may not be realistic to insist on permits being issued in the name of an association at this stage. Efforts should now be made to bring together the small operators by offering incentives in the nature of a 10% rebate in the motor vehicles tax for members of newly formed viable units for a period of 5 years, preference in the matter of counter-signatures and grant of temporary permits, rebate in insurance premium, the same facilities which are available to big fleet owners regarding supply of tyres should be available to a viable unit including an association, availability of spare parts at controlled prices, preference in licensing of booking agents, grant of import licences for spare parts, facilities for land etc. for building workshop and warehouses, and credit facilities through financial institutions. (Para 6.5).

55. In our scheme of things, persons having ten trucks or five buses can form an association to be duly registered. Such associations should maintain booking and forwarding agency, servicing and repair facility, keep proper accounts and records and perform such other duties as may be prescribed by the State Government. The members of such an association will be considered as members of a viable unit. (Para 6.6).

56. Member-operators of an association will have the right to secede from the association, if they are dissatisfied with its working. However, they should exercise this option not oftener than once in a year. (Para 6.7).

57. The owner of a vehicle should be a member of only one association at a time. It is also desirable that the owners who get the vehicle registered in a particular district also enroll themselves as members of viable units in that area. (Para 6.8).

58. Small operators can also organise themselves into service co-operative societies for providing the common facilities, referred to earlier. The members of such a society will also be considered as members of a viable unit. (Para 6.9).

59. We would strongly urge that there should be no compulsion by State Governments in the formation of viable units. These units should spring up voluntarily and spontaneously. (Para 6.10).

60. The expenditure likely to be incurred by State Governments on account of tax rebate to viable units, which we have recommended, will be about Rs. 6 crores per annum. The share of each Government will not exceed Rs. 50 lakhs per annum on average. But this would give the industry an additional income of Rs. 40 crores per annum and might well create a demand for an additional 4,000 vehicles per annum. The schemes of subsidy would, therefore, increase the State resources on account of accelerated growth in the road transport industry. (Para 6.11).

61. There should be a net work of transport associations in the country, the last rung in the ladder being 'viable units'. These viable units might be affiliated to district associations, the district associations affiliated to State associations and State associations to all-India associations. (Para 6.12).

62. The cause of road transport will be better served if the industry is suitably re-organised so that the operators are able to ventilate their grievances and seek redress in an effective manner through the forum of associations. (Para 6.12).

63. In order to remove the uncertainty in the minds of private operators in regard to nationalisation of road transport services, we suggest that State Governments should draw up and publish their time schedules of nationalisation programmes. (Para 6.13).

64. We do not make any recommendation on behalf of taxi trade. (Para 6.14).

65. Although several expert bodies went into different aspects of the road transport industry in the past and made a number of important recommendations, there has been very little by way of practical implementation. One of the reasons for this situation appears to be the absence of a suitable agency at the Centre to review the progress of action on the recommendations of the various bodies. The Ministry of Transport and Shipping may consider setting up a separate implementation and evaluation cell under them to watch and review follow-up action on our report and also of the reports of the other expert bodies, appointed from time to time. (Para 6.15).

ACKNOWLEDGEMENTS

We would like to acknowledge the full measure of cooperation which we received from the State Governments and Administration of Union Territories and various individuals and organisations of road transport operators, who furnished all the basic data required by us. We did not request Government for separate secretarial assistance for our enquiry and availed ourselves of the services of the staff of the Road Transport Division in the Ministry of Transport and Shipping, particularly the Section Officer, Shri N. A. A. Narayanan and the Senior Economic Investigator, Shri A. Arunachalam. We place on record our sincere appreciation of the zeal, ability, diligence and industry displayed by these two officials in collecting, sifting and tabulating the necessary information, collating the evidence tendered before us, maintaining a complete record of all our proceedings and in assisting us in the preparation of this report. We would also express our thanks and appreciation to the Ministry of Transport & Shipping for their unfailing courtesy and cooperation without which our work could not have proceeded smoothly.

2. There has been some delay in the submission of this report. This is mainly because we were awaiting the findings of the Road Transport Taxation Enquiry Committee. As the Fourth Five Year Plan has yet to be finalised, we hope that the Government of India and the State Governments and Administrations of Union Territories will find our recommendations useful in drawing up suitable schemes for reorganisation of the road transport industry.



S. MULLICK
Chairman

(R. B. Mathur)

(D. P. Varun)

(M. S. Palnitkar)

(V. Sankaran)

(H. Sambamurthy)

(Kundan Lal)

(T. S. Santhanam)

(Manohar Singh Dhody)

(R. K. Sharma)

Convener.
Member-

ANNEXURE I

*(To be Answered by the Departments of the State Governments
and Union Administrations dealing with the Administration
of the Motor Vehicles Act and Rules and Motor Vehicles
Taxation Act and Rules)*

PART I—General

1. Kindly furnish statistics of motor vehicles, stage carriages, public carriers, contract carriages and non-transport vehicles, if any in the State/Union Territory as on 31-3-65.
2. Vehicle population ratio (the number of vehicles per 1,000 population) :
 - (a) State carriages (buses).
 - (b) Public carriers.
 - (c) Contract carriages :—
 - (i) Motor cars (taxis)
 - (ii) Motor cabs (3-wheelers like auto-rickshaws).
 - (iii) Contract carriages of higher seating capacity.
3. Number of operators in the State/Union Territory according to the number of vehicles owned and the form of management :
 - (a) Stage carriages (Particulars to be filled in the proforma attached).
 - (b) Public carriers.
 - (c) Motor cabs (Taxis).
4. Whether the State/Union Administration had at any time in the past, or has currently fixed the strength of fleet in the case of a viable unit. If so, what is the strength prescribed for—
 - (a) Stage carriages.
 - (b) Public carriers.
 - (c) Motor cabs (Taxis).
5. (a) Where the strength of a viable unit was/has been fixed, what are the incentives given and the regulatory methods adopted to encourage the formation of such units?
 - (b) What, in your opinion, has been the progress in this direction during the last 3 years?
6. Kindly indicate the tax structure (rate of motor vehicles tax and other taxes if any) applicable to the following category vehicles as on 1-4-65 :—
 - (a) Stage carriages (buses).
 - (b) Public carriers.
 - (c) Motor cabs (Taxis)
7. Please indicate whether any concession in tax is given to viable units.
8. The present fare/freight structure (with maximum and minimum rates) for—
 - (a) Stage carriages (buses).
 - (b) Public carriers.
 - (c) Motor cabs (Taxis).

9. What are the other levies and fees payable in respect of a vehicle ? Please furnish the information under the classified headings and also indicate the intervals at which these charges are payable ?
10. What is the route length or area of operation permitted in respect of stage carriages and/or public carriers in the State/Union Territory ?
11. What is the maximum laden weight in kilograms ordinarily permitted in the State/Union Territory ? (If different maximum are fixed for different terrains or classification of goods, they may be furnished under classified headings).

PART II—Views and Opinions

12. What, in your view, should be the guiding principles in determining the size a fleet of—
 - (a) Stage carriages.
 - (b) Public carriers.
 - (c) Motor cabs (Taxis).
 for efficient operation and economic maintenance of the service ?
13. What, in your opinion, should be the optimum size of a fleet which can be called a viable unit in respect of—
 - (a) Stage carriages.
 - (b) Public carriers.
 - (c) Motor cabs (Taxis).
14. What, in your view, are the factors which inhibit the formation of viable units of road transport operations and what measures would you suggest to remove these inhibitory factors ?
15. What are the regulatory measures, statutory or otherwise, that may be necessary for the speedy creation of such viable units ?
16. Are you aware of any tendency of the bigger units disintegrating into small ones ? If so, what are the reasons for it and what remedy would you suggest to prevent such disintegration ?
17. Where a particular owner/undertaking holds vehicles with permits granted in more than one region, or State, should the fleet strength of such owner/undertaking be reckoned with regard to the total number of vehicles held by him/it or separately with regard to the number of vehicles held in individual regions or States ?
18. Where an owner/undertaking holds permits for more than one category of vehicles, viz.—
 - (a) Stage carriages.
 - (b) Public carriers.
 - (c) Motor cabs (Taxis).
 should the fleet strength be reckoned with reference to the total number of permits held by him/it or separately with reference to each category of permits, viz. stage carriage permits, public carrier's permits and contract carriage permits ?
19. What method would you suggest for the speedy formation of viable units and would you recommend any one or more of the following for the formation of such viable units :—
 - (a) by grouping of permits in an area or route as follows :—

- (i) cities.
 - (ii) towns.
 - (iii) suburban routes.
 - (iv) intra-District and intra regional routes.
 - (v) inter-District and inter-Regional routes.
 - (vi) inter-State routes.
 - (vii) express services.
- (b) by grouping individual managements in a particular principal place of business.
- (c) By forming cooperative societies or companies registered under the companies Act or partnership firms (without losing their identity or deriving their profits separately) without surrendering the individuality by encouraging small operators to build up viable units by grant of permits or transfer of permits.
20. Do you consider that, in order to maintain the 'viable unit' in an efficient manner conducive to the interests of the public, the owner or the organisation of the unit should be given Government patronage ? If so, in what manner ?
 21. Should any ceiling be placed on the size of fleets to prevent monopolistic tendencies and creation of vested interests ? If not, what safeguards would you suggest against such tendencies ?
 22. Do you think that any statutory provision is necessary for the formation of association of transport operators at State and regional levels ? If so, what specific function and responsibilities would you suggest for such association ?
 23. Is joint ownership of vehicles a pre-requisite of a viable unit or can viability be achieved by some sort of loose association ? Give your views on it.
 24. Are there one or more Statewide or regional associations of transport operators functioning in the State/Union Territory ? If so, please give its/their name(s) and the names of its/their office bearers as known to you ?
 25. Have any of these associations been recognised by the State Government/Union Administration ?
 26. Do you ever consult members of this association ? If so, generally on what occasions ?
 27. What do you think are the role and responsibilities of this association towards (i) Government; (ii) its members; and (iii) the society at large.
 28. To what extent, in your opinion, can these associations be relied upon to perform such functions as may be necessary in the public interest to be performed by road transport industry ?
 29. Can members of these associations be given some facilities and/or concessions, as distinct from non-members, such as those given to members of the automobile associations now functioning in some parts of the country ?
 30. Do you think that such an association should be granted any privileges or rights over its members; if so, whether these should be statutorily granted or by executive orders ?

PROFORMA
(Question No. 6 in Part I)
Stage Carriages/Public Carriers/Contract Carriages (Motor cabs-Taxis only)

No. of Vehicles owned	No. of operators and form of management								
	Individuals	Partnership	Association of persons other than partnership	Hindu undivided family	Co-operative Societies/ private limited companies	Public Ltd. companies	State transport corporation	Department of State transport undertakings	Total
	a	b	c	d	e	f	g	h	
1 only
2 only
3 only
4 only
5 only
6 only
7 only
8 only
9 only
10 only
11-15 only
16-20 only
21-30 only
31-40 only
41-50 only
51 and above

No. of vehicles owned	No. of vehicles owned by them								Remarks
	Individuals	Partner-ship	Associa-tion of persons other than partner-ship	Hindu undivided family	Co-operative societies/private ltd., companies	Public limited company	State trans-port corpn.	Deptt. of state trans-port under taking		Total
	a	b	c	d	e	f	g	h	
1 only
2 only
3 only
4 only
5 only
6 only
7 only
8 only
9 only
10 only
11-15 only
16-20 only
21-30 only
31-40 only
41-50 only
51 and above



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ANNEXURE II

Questionnaire for Operators and others

[PART I A—(Stage Carriages and Contract Carriages)]

1. Name of the undertaking/owner.
2. Address of the undertaking/owner.
3. Form of management :
 - (a) Individual.
 - (b) Partnership.
 - (c) Association of persons other than partnership.
 - (d) Hindu undivided family.
 - (e) Co-operative Society/Private Ltd., Company.
 - (f) Public Limited Company.
 - (g) State Road Transport Corporation.
 - (h) Departmental Undertaking of State Government or Union Administration.
4. Number of vehicles owned and or

TOTAL

- (a) Stage Carriages
- (b) Motor cabs (Taxis).

No. of vehicles

Owned and managed by the undertaking/owner	Owned by others but managed by the undertaking/owner.	Owned by the undertaking/managed by others

Number in

Petrol driven	Diesel driven	Total

5. Permitted seated passenger capacity of buses (the number of standing passengers, wherever allowed, should be shown separately in brackets).
 - (a) Up to 20 passengers
 - (b) 21 to 50 passengers
 - (c) 51 to 60 passengers. . . .
 - (d) Above 60 passengers. . . .

TOTAL

6. Number and types of permits

	No. of permits	No. of buses	Total route length
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(a) Stage Carriages.

- (i) Inter-State routes
- (ii) Inter District/Regional routes
- (iii) Intra-District/Regional routes.
- (iv) City Service/Town Service routes.
- (v) Spare buses or Reserve buses.

(b) Motor Cabs (Taxis)

No. of vehicles with permits.

- (i) Intra-State operation
- (ii) Inter-district/regional operation
- (iii) Intra-district/regional operation
- (iv) City or town operation

7. If you own only one vehicle, do you drive it yourself ?

What is your total present investment in vehicles and how much of this amount has been raised by loan from hire-purchase finance agencies and other sources ?

Total number of persons employed :

(A) Operational Staff	Pay per head	Allowance per head	Total Cost per head	No. of persons employed	Total cost of staff	
					Monthly	Per Diem

(a) Drivers

(b) Conductors

(c) Cleaners

(d) Inspectors and other checking staff.

(B) Administrative Staff.

(i) Managers

(ii) Accountants

(iii) Clerks.

(C) Maintenance Staff.

(Please furnish this information only if the undertaking/owner has a garage of its own).

(i) Mechanics

(ii) Foremen.

10. (a) Total average service performed per day in Kms.

Stage Carriage services	Average No. of operations per day	Average service mileage per day	Percentage of vehicle utilisa- tion
	1	2	3
1. Vehicles with capacity of 20 passen- gers.			
2. Vehicles with capacity of 21 to 50 passengers.			
3. Vehicles with capacity of 51—60 passengers.			
4. Vehicles with capacity of 61 and above passengers.			
5. Utilisation of spare buses.			
6. Total average service mileage per day			
(b) Motor Cabs (Taxis) <i>Average performance per day in Kms.</i>			

	Earning kilometre- rage	Non- earning kilo- meterage	Total kilo- meterage	
(c) Stage Carriages.				
The average no of days for which the vehicles remained unused or idle during the year.				
Route buses	Inter State routes	Inter District regional routes	Intra- District/ regional routes	City Service/ Town Service

(d) Motor Cabs (Taxis).

Average no. of days of non-
utilisation.

11. Service facilities.

(a) Have you got a workshop of your own? If so, what are the facilities provided therein for :—

(i) major overhauls;

(ii) minor repairs and routine maintenance.

(b) If the undertaking/owner has no garages or workshop of its own how often are the vehicles taken to a private workshop for maintenance and repairs?

(c) Are you satisfied with the charges and the quality of the service rendered by the private repair shops?

(d) What arrangements do you have, if your vehicle breaks down en route?

- (e) How many days, normally per vehicle, are lost in a year on account of :
 - (i) major repairs
 - (ii) minor repairs
 - (f) Do you think you can reduce these idle days if you had your own servicing arrangements ? If so, to what extent ?
 - (g) How many vehicles do you think you should own before you can set up a workshop of your own ?
12. *Spare parts*
- (a) Do you experience any difficulty in getting spare parts from the market ?
 - (b) Are you satisfied with the quality and prices ?
 - (c) Are you getting actual users' Import Licence either as a fleet-owner or as a member of a co-operative society ?
 - (d) What will be the extent of saving (indicate the percentage) in the cost of maintenance etc., if you import spare parts directly from the manufacturers on A.U. basis ?
13. Furnish particulars of the cost of operation of stage carriages and contract carriages in the proforma attached.
14. What is the average mileage performed by a vehicle (for the last three years) ?
15. Cost of operation per passenger kilometer (give figures for last three years).
16. Profit per passenger kilometer exclusive of depreciation and all other expenses.
17. Does this profit exclude your own wages; if not, what do you estimate your wages to be ?
18. What is the rate of return on your capital ?
19. Do you consider it
- (a) reasonable;
 - (b) low.
20. Are you in favour of getting hour work in the RTA or STAs office done through your associations; if not, why ?
21. Are you in a position to provide, of your own, resting and other facilities to your drivers *en route* or would you like to join others in providing common facilities for the comfort of

your crew *en route* or at the destinations ? If you prefer to join others, what help, if any, would you need from Government in this respect ?

22. Do you think that if you own more stage carriages/contract carriages, say 5, you would earn more per vehicle per year. If so, what is likely to be the increase in the revenue.
23. Do you think that you could curtail your present expenditure if you had a larger number of vehicles ? If so, on which of the following items the expenditure can be reduced and to what extent :—
- (a) rate of borrowing from finance companies.
 - (b) purchase of spare parts.
 - (c) servicing of your vehicles.

(Please indicate the approximate percentage of saving against each of the above items of the number of vehicles owned by you was 5, 10 and 20)

PROFORMA

Cost of Operation of Stage and Contract Carriages :

(Depreciation based on written down value or 10 years/5 years)
for each vehicle of different passenger capacity and service.

- (a) (i) Registration No.
- (ii) Make and Model.
- (iii) Type.
- (iv) Nature of service.
- (b) Initial cost of the bus.
- (c) Capacity No. of Passengers seats (Standing passengers) if any, should be shown separately in brackets.
- (d) Permitted daily service in kilometers.
- (e) Average no of working days in a year.
- (f) Rate of fare per passenger in Kilometer.
- (g) Average annual written down cost of depreciation on the basis of 10 year and 5 year period.
- (h) Average fuel consumption per day in litres.
- (j) (i) Average cost of fuel per day.
- (ii) Average cost of lubricating oil per day.

TOTAL

- (k) Average cost of pay for drivers and conductors per day.
- (l) Average cost of other Establishment per day.

- (m) Cost of repair and maintenance per day.
- (n) Interest on capital at Bank Rates per year.
Interest on capital at Bank Rates per day.
- (o) (i) Cost of insurance per year.
(ii) Cost of insurance per day.
- (p) Other expenses per year.
Other expenses per day.

ABSTRACT COST PER DAY

TOTAL cost per day

- (q) Average earning per day.
 - (i) Collection from passenger fare
 - (ii) Collection from freight on luggage or goods.
- (iii) TOTAL
- (r) Average cost of operation per day (as per abstract above).
- (s) Average net profit per day.
- (t) Average working cost per kilometer in paise.
- (u) Average earning per kilometer in paise.

General Remarks

PART II B (PUBLIC CARRIERS)

1. Name of the undertaking/owner.
2. Address of the undertaking/owner.
3. Form of management.
 - (a) Individual
 - (b) Partnership.
 - (c) Association of persons other than partnership.
 - (d) Hindu undivided family.
 - (e) Co-operative Society/Private Limited Company.
 - (f) Public Limited Company.
 - (g) State Road Transport Corporation.
 - (h) Departmental undertaking of the State Government.

4. Number of vehicles owned and/or managed at the end of the year 1964.

	Number of vehicles		
	owned and managed by the undertaking	owned by others but managed by the undertaking	owned by the undertaking but managed by others
(a) Trucks			
(b) Trailers			
(c) Tractor-trailers			
(d) Articulated vehicles or other tractor-trailer combinations.			
(e) TOTAL			

5. Carrying capacity of the vehicle

	Number of trucks		No. of trailers
	Petrol	Diesel	
	(1)	(2)	(3)

6. Registered laden weight and permitted laden Weight of the vehicles.

Registered laden weight upto.	Permitted laden weight if it is less than R.L.W.	Number of trucks permitted		Number of trailers permitted
		Petrol	Diesel	
		(1)	(2)	(3)

(a) This information may be given in the ascending order.

(b) R.L.W. and/or P.L.W. as the case may be.

(c) according to the slabs in the Taxation Schedule in the State.

7. If you own only one truck, do you drive it yourself ?

8. What is your total present investment in vehicles and how much if it has been raised by loan from hire-purchase finance agencies and other sources ?

9. Number of regular permits

	Number of trucks permitted		No. of trailers permitted
	Petrol	Diesel	

- (a) Multi-state
- (b) Inter-State
- (c) State-wide permits
- (d) Intra-State (inter-regional)
- (e) Regional (confined to one Region)

10. Temporary permits :

Number of permits obtained during the year valid for			
1	2	3	4
months	months	months	months

(a) Inter-State (upto a distance of 500 miles or 800 kilometers)

(b) Inter-State (more than 500 miles or 800 kilometers)

(c) Intra-State

11. Number of persons employed :

<i>Staff</i>			
Allowance per head	Total per head	Number of persons employed	Total cost of staff
			Monthly Per diem.

Operational :

- (i) Drivers.
- (ii) Attendants, if any.
- (iii) Cleaners.
- (iv) Inspectors.

Administrative :

Managers, Accountants, Clerks etc.

Maintenance : (This information need be furnished only if the owner/undertaking has a separate garage or repair shop of its own).

Mechanics,

Foremen etc.

12. (a) Do you have a workshop of your own ? If so, what facilities are provided therein for—

- (i) major overhauls; and
 - (ii) minor repairs and routine maintenance.
- (b) If the undertaking/owner has no garage or workshop of its own, how often are the vehicles taken to a workshop for maintenance and repairs ?
- (c) Are you satisfied with the charges and the quality of the service rendered by the private repair shops ?
- (d) What arrangements do you have if your vehicle breaks down *en route* ?

(e) How many days, normally per vehicle, are lost in a year for—
(i) major repairs.

(ii) minor repairs.

(f) Do you think that you can reduce these idle days if you had your own servicing arrangements? If so, to what extent?

(g) How many vehicles do you think you should own before you can set up a workshop of your own?

13. *Spare Parts*

(a) Do you experience any difficulty in getting spare parts from the market?

(b) Are you satisfied with their quality and prices?

(c) Are you getting actual users' import licences either as a fleet-owner or as a member of a co-operative society?

(d) What will be the extent of saving (indicate the percentage in the cost of maintenance etc. if you import spare parts directly from the manufacturer on Actual Users' basis.

14. Total fleet kilometer etc. performed for the year :—

In kilometres

(a)

(b)

(c)

(d) etc.

(The above information may be given in the ascending order of R.L.W. and/or P.L.W. of the vehicles, as the case may be, according to the slabs in the Taxation Schedule in the State/Union Territory).

15. Traffic carried for the whole year,

(Here give particulars of commodities which constituted not less than 10 percent of the total traffic carried during the year)

Tonnage carried during the year					
Up to 80 kms.	Bet, 81 & 160 kms.	Bet. 161 240 kms.	Bet. 241- 280 kms.	Bet. 481- 800 kms.	Over 800 kms.
(i)	(ii)	(iii)	(iv)	(v)	(vi)

16. Total freight earnings :

Classification

(a)

(b)

(c)

(d)

etc.

(The above information may be given in the ascending order of the R.L.W. and/or P.L.W. of the vehicles, as the case may be, according to the slabs in the Taxation Schedule in the State).

16. Average freight rate per ton-kilometre.
17. What is average mileage performed by a truck ?
(Give figures for the last 3 years).
18. Gross booking per tonne kilometre
(Give figures for the last 3 years)
19. Cost of operation per tonne kilometre
(Give figures for the last 3 years)
20. Profit per ton kilometre, exclusive of depreciation and all other expenses.
21. Does this profit exclude your own wages; if not, what do you estimate your wages to be ?
22. What is the rate of return on your capital ?
23. Do you consider it
(a) Reasonable;
(d) low.
24. Does the undertaking/owner has its/ his own booking, forwarding or/collecting agencies ? If so, please state whether booking is done for your vehicles along or for the vehicles of others also.
25. If the answer to the first question in (24) is in the negative, how and through whom the undertaking/owner gets these services. (Place give name and address of each agent through whom 20 per cent or more of the traffic of the owner/undertaking is booked etc.)
26. What is the percentage of the freight which you receive from booking agents in case you do not book your own goods ?
27. What is the normal charge made by you when you book goods for other trucks, say, on :
(a) a full truck load;
(d) on a parcel service.
28. Do you insure goods on route and while in your custody ?
29. What is the extent of security offered by you for rightful delivery of public goods entrusted to you ?
30. Furnish information on cost of operation of goods vehicles in the proforma attached.

31. Are you in favour of getting your work in the R.T.A. or S.T.A. office done through your association; if not, why not ?
32. Are you in a position to provide, on your own, resting and other facilities to your drivers *en route* ? Would you like to join others in providing common facilities for the comfort of your crew *en route* or at the destinations ? If so, what help would you need in this connection from Government ?
33. Do you think that if you own more trucks, say 5, you would earn more per vehicle per year. If so, what is likely to be the increase in the revenue ?
34. Do you think that you could curtail your present expenditure if you had a larger number of vehicles ? If so, on which of the following items the expenditure can be reduced and to what extent :—
- (a) rate of borrowing from finance companies.
 - (b) purchase of spare parts;
 - (c) servicing of your vehicles.
- (Please indicate the approximate percentage of saving against each of the above items if the number of vehicles owned by you was 5, 10 and 20).

PROFORMA

Cost Sheet of goods vehicles operation for each vehicle or combination.

(Depreciation based on written-down value of vehicle for 10 and 5 years)

	Truck trailer	Tractor trailer	Articulated vehicle	Other combina- tions if any
(a) Average initial cost of a vehicle.				
(b) Average permitted carrying capacity of the vehicle.				
(c) Average tonnage carried during the year.				
(d) Number of working days in a year.				
(e) (i) Cost of depreciation per year.				
(ii) Cost of depreciation per day.				
(f) (i) Tax per quarter.				
(ii) Tax per day.				

- (g) Average fuel consumption per day in litres.
- (h) (i) Average cost of fuel per day.
(ii) Average cost of lubrication oil per day.
- (i) Average cost of pay for driver-attender-cleaner per day.
- (j) Average cost of other establishment per day.
- (k) Cost of repair and maintenance per day.
- (l) (i) Interest on capital at bank rates per year.
(ii) Interest on capital at Bank rates per day.
- (m) (i) Cost of insurance per year.
(ii) Cost of insurance per day.
- (n) Other expenses if any under classified headings per day.

Abstract	Cost per day
(e)	
(f)	
(g)	
(h)	
(i)	
(j)	
(k)	
(l)	
(m)	
(n)	
TOTAL COST :	Per day

- (o) (i) Average earning from freights per year.
(ii) Average earning from freights per day.
- (p) Average cost of operation per day (vice Abstract).
- (q) Average net profit per year.
- (r) Average working cost per tonne-Kilometre in, paise.
- (s) Average earning per tonne-kilometre in paise.
- (t) General Remarks.

QUESTIONNAIRE

PART III—Views and Opinions

1. What, in your view, should be the guiding principles in determining the size of a fleet of—
 - (a) Stage Carriages.
 - (b) Public Carriers.
 - (c) Motor Cabs (Taxis).for efficient operation and economic maintenance of the service ?
2. What, in your opinion, should be the optimum size of a fleet which can be called a viable unit in respect of—
 - (a) Stage Carriages.
 - (b) Public Carriers.
 - (c) Motor Cabs (Taxis).
3. What, in your opinion, are the factors which inhibit the formation of viable units of road transport operators, and what measures would you suggest to remove these inhibitory factors ?
4. What are the regulatory measures, statutory or otherwise, that may be necessary for the speedy creation of such viable units ?
5. Are you aware of any tendency of the bigger units disintegrating into small ones ? If so, what are the reasons for it and what remedy do you suggest to prevent such disintegration ?
6. Where a particular management holds vehicles with permits granted in more than one region, should the fleet strength of such management be reckoned with regard to the total number of vehicles held by it in the State or separately with regard to the number of vehicles held in individual regions ?
7. Where a management holds permits for more than one category of vehicles ?
viz.—
 - (a) Stage Carriages.
 - (b) Public Carriers.
 - (c) Motor Cabs (Taxis).Should the fleet strength be reckoned with reference to such category of permits or separately with reference to each category of permits, viz. stage carriage permits, public carriers' permits and contract carriage permits ?
8. What method would you suggest for the speedy formation of viable units and would you recommend any one or more of the following for the formation of such viable units :—
 - (a) by grouping of permits in an area or route as follows :—
 - (i) Cities.
 - (ii) Towns.
 - (iii) Suburban routes.

- (iv) Intra-district and
Intra-regional routes.
 - (v) Inter-District and inter-Regional routes.
 - (vi) inter-State routes and
 - (vii) express services.
- (b) by grouping individual managements in a particular principal place of business.
 - (c) by forming cooperative societies or companies registered under the Companies Act or partnership firms (without losing their identity or deriving their profits separately) without surrendering the individuality by encouraging small operators to build up viable units by grant of permits or transfer of permits.
9. Do you consider that in order to maintain the 'viable unit' in an efficient manner conducive to the interests of the public, the owner or the organisation of the unit should be encouraged by Government patronage ? If so, in what manner ?
 10. Should any ceiling be placed on the size of fleets to prevent monopolistic tendencies and creation of vested interests ? If not, what safeguards do you suggest against such tendencies ?
 11. Do you think any statutory provision is necessary for the formation of associations of transport operators at State and regional levels ? If so, what specific functions and responsibilities would you suggest for such associations ?
 12. Do you consider the joint ownership of vehicles as a pre-requisite of a viable unit or can viability be achieved by some sort of loose associations ? Give your views.
 13. Do you think it necessary that State-wide or regional associations of road transport operators should be organised in the different States ? If so, what do you think should be the role and responsibilities of these associations towards (i) Government; (ii) its members; and (iii) the society at large.
 14. To what extent, in your opinion, can these associations be relied upon to perform such functions as may be necessary in the public interests to be performed by road transport industry.
 15. Do you think that members of these associations should be given some facilities and/or concessions as distinct from non-members such as, those given to members of the automobile associations now functioning in some parts of the country ? If so, indicate the facilities and/or concessions that should be given ?
 16. Do you think that such associations should be granted any privileges or rights over their members; if so whether these should be statutorily granted or by executive orders ?

ANNEXURE III

Statement showing the number of meetings held by the Group

	Date	Venue	Parties interviewed
1.	5-7-1965 6-7-1965	New Delhi	Internal discussion for the preparation of the questionnaire and to chalk out programme of action.
2.	22-11-1965 23-11-1965	New Delhi	<p><i>Delhi Transporters' Association :</i></p> <p>Shri Ganda Singh Shri N. D. Jain Shri Sukhdev Singh Shri Dalip Singh Shri Nand Lal</p> <p><i>Truck Operators' Union Roshanara Road, Delhi. :</i></p> <p>Shri Thakur Dass Mehra Shri Gurnam Singh Shri Lal Singh Shri Gurbax Singh</p> <p><i>Delhi Provincial Motor Transport Union Congress :</i></p> <p>Shri Murari Lal Shri Manohar Singh Shri Sarwan Singh Shri Sarnagat Singh Shri Hari Singh Giani</p> <p><i>State Governments :</i></p> <p>Shri Iftikar Hussain, Transport Commissioner, U.P. Shri P. P. Srivastava, Joint Secretary (Transport), Himachal Pradesh Shri Devi Sahai, Transport Commissioner, Madhya Pradesh Shri P. L. Chhabra, Provincial Transport Controller, Punjab Shri Achal Singh, Deputy Director of Transport, Rajasthan.</p>
	29-12-1965 30-12-1965	Bombay	<p><i>Representatives of Road Transport Organisations :</i></p> <p>Shri P. K. Iyer, Operator of Nagpur. Shri R. V. Kulkarni, Hon. Secretary, Maharashtra Lorry Operators' Association, Bombay. Shri K. V. Bandal, Chairman, Poona District Motor Transport Co-operative Society Ltd. Shri C. S. Patravali, Shri P. P. Patravali, and Shri V. G. Kulkarni of Ghatge and Patil Transporters (P) Ltd., Kolhapur. Shri Jaswant Singh, Bharat Roadways, Bombay. Shri Iqbal Singh, K.M.T. Co., Bombay (Individual operator)</p>

Date	Venue	Parties interviewed
		Shri M. S. Dikshit & Co., Poona.
		Shri R. T. Vidwas, M/s. M. S. Dikshit & Co. Bombay.
		Shri V. B. Kalange, General Secretary, Autorikshaw Coop. Union, Poona.
		Shri M. K. Mahendali and Shri B. B. Mahendali of M. K. Mahendali Private Ltd., Poona.
		Shri M. N. Shroff, Shere Transport Amravati
		Shri C. D. Jefferies, Indian Institute of Road Transport, Bombay.
		Shri C. S. Nair, Secretary, I.R.T.D.A., Bombay.
		Shri S. Johns, Store Officer, Maharashtra State Road Transport Corporation, Bombay.
		Shri Hasmukhbhai Parikh, Gujarat Chamber of Commerce.
		Shri Baboobhai Parikh, Gujarat Chamber of Commerce.
		Shri J. M. Ashtikar Raipur Transport Co., (Raipur), Madhya Pradesh.
		Shri Mohanlal Vyas, President, Chhatisgarh Yatayat Sangh, Raipur.
		Shri S. R. Thakur, Fleet operator, Panjim (Goa).
		Shri V. V. Agashe, Shri G. G. Ghalsahi, Shri V. G. Naik, Shri Y. B. Bhore,
		Shri Sankpal S. K. and Shri B. B. Mudhele operators from Kolhapur.
		Shri D. R. Gadkari, Secretary, Parabhani Transport Co-operative Society Ltd.,
		Shri M. V. Pai, Kolhapur.
		Shri K. G. Subrahmanian, Secretary, W.I.A.A., Bombay.
		Shri Jamuna Prasad Sharma, Nagpur Transport Company Association.
4. 28-1-1966 29-1-1966	Madras.	<p><i>Representatives of the State Governments :</i></p> <p>Shri Mohammed Vazir Ahmed, Transport Commissioner, Mysore.</p> <p>Shri A. S. Iyer, Deputy Transport Commissioner, Kerala.</p> <p>Shri G. L. Balakrishna Reddy, Secretary, State Transport Authority, Andhra Pradesh.</p> <p>Shri T. V. Venkataraman, Director, Madras State Transport Department.</p> <p>Shri P. R. Subramaniam, Executive Engineer (Engineering Cell) Deputy Transport Commissioner, Madras.</p>

<i>Date</i>	<i>Venue</i>	<i>Parties interviewed</i>
		Shri G. C. Paramasivan and Shri Ayyaswami of Tiruchengode Lorry Owners' Association.
		Shri S. Sethuramalingam, Madura Roadways (Private) Ltd.,
		Shri Palaniappa, Messrs Palaniappa Transporters, Madras.
5. 4-3-1966 5-3-1966	Calcutta	<i>Representatives of State Governments:</i> Shri K. N. Roy, Transport Commissioner, Bihar. Shri H. S. Dubey, Chief Secretary, Government of Tripura. Shri P. H. Chaudhuri, General Manager, Manipur State Transport. Shri M. M. Shariff, Secretary, State Transport Authority, Orissa. Shri K. Kakoti, Assistant Transport Commissioner, Assam. R. T. O., Gauhati. Col. Ray, Managing Director, Orissa State Commercial Transport, Corporation, Cuttack. <i>Representatives of Private Operators :</i> Dr. N. Sanyal and Shri A. R. Das Gupta of Bengal National Chamber of Commerce and Industry. Shri Swaran Singh and Shri I. P. Goenka of Calcutta Goods Transport Association. Shri Millan Sen, Representative of R. Sen & Co. and Indian Chamber of Commerce. Shri S. K. Ganguli, Indian Road and Transport Development Association (Calcutta Branch). Shri G. L. Sayal, Indian Institute of Road Transport (Eastern Branch). <i>Representatives of Private operators:</i> Shri S. A. Quadri Deputy General Manager, Mysore State Road Transport Corporation. Shri Ramanna, M. G. Brothers, Bellary. Shri S. Govindarajan, Secretary, Salem District Lorry owners' Association (The President of the Association also gave evidence on 29-1-66). Shri Hasan Mohammed, Secretary, North Arcot District Co-operative Society for ex-Servicemen, Vellore. Shri A. S. Krishnan and Shri P. N. Nagsamy, Southern Roadways (Private) Ltd., Madurai and Southern India Chambers of Commerce, Madras.

<i>Date</i>	<i>Venue</i>	<i>Parties interviewed</i>
		Shri R. Srinivas, M/s. Southern Roadways Ltd., Madurai.
		Shri P. V. S. Mani, M.B.T. Company, Madras.
		Shri V. N. Krishna Rao, I.R.T.D.A., Madras Branch.
		Shri K. A. V. Easwaran and Shri S. Govindaswami of Madras Motor Vehicles and Allied Industries Association.
		Shri S. C. V. Gopal, Tamilnad Lorry Owners' Federation, Madras.
		Shri Y. Ramabrahman, Andhra Pradesh Motor Unions' Congress.
		Shri N. Ramaswami Odayar, Shri C. Krishnaswami, M. A. and Shri R. Sambasivam of Salem—Dharmपुरi Bus Owners' Association.
		Shri S. N. Chatterjee, Deputy Secretary, Bharat Chamber of Commerce.
		Shri O. P. Goyal, Indian Institute of Road Transport.
		Shri Sarabjit Singh, East Bengal Lorry Syndicate.
		Shri Harnandan Prasad Singh and Shri R. P. Singh of Patna Zilla Truck Owners' Association.
		Shri Raghunath Ram Chaudury, Fleet Owner from Arrab.
6. 28-3-1968 29-3-1968	New Delhi	Consideration of the Report.

नमो भगवते वासुदेवाय

ANNEXURE IV

List of Parties who sent replies and memoranda to the Group

Office of the Secretary, Dhubri-Golakganj-Boxirhat Bus Association.
Calcutta Goods Transport Association, Calcutta.
All Orissa Motor Unions' Congress, Cuttack.
Andhra Pradesh Motor Unions Congress, Hyderabad.
All India Motor Unions' Congress, New Delhi.
Indian Roads & Transport Development Association Ltd., Bombay.
Motor Vehicles & Allied Industries Association, Madras.
Madura-Ramnad Chamber of Commerce, Madurai-1.
Gujarat Vepari Mahamandal, Ahmedabad.
Indian Institute of Road Transport, Bombay.
Delhi Provincial Motor Transport Union Congress, Delhi.
Delhi Transporters' Association, Delhi.
Indian Institute of Road Transport, Delhi Branch.
Bengal National Chamber of Commerce & Industry, Calcutta.
Shri B. K. Tandon, Head of Economics Deptt., University of Udaipur.
Jiwaji University, Gwalior.
Allahabad University, Allahabad.
University of Rajasthan, Jaipur.
Shri S. K. Madak, Lecturer in Economics, Nagpur University, Nagpur.
University of Indore, Indore.
Andhra Pradesh State Road Transport Corporation, Hyderabad.
Durgapur State Transport Service, Burdwan.
Gujarat State Road Transport Corporation, Ahmedabad.
Ahmedabad Municipal Transport Service (Ahmedabad Municipal Corporation),
Ahmedabad.
Kerala State Road Transport Corporation, Trivandrum.
Calcutta State Transport Corporation, Calcutta.

NOTE : In addition to these organisations/persons, State Governments and administrations of Union Territories also sent replies to the Group's questionnaire. We also received data on the Cost of operation of vehicles from a few individual operators.

नियमन नयन

ANNEXURE V
Index Number of Industrial Production (1956—100)

Weights	1951	1955	1960	1961	1962	1963	1964	1965	1966	Per cent change in 1966 over 1965	
										10	11
1	2	3	4	5	6	7	8	9	10	11	
General Index	100.00	73.5	91.9	130.1	141.0	153.3	165.8	177.4	186.9	191.5	+2.5
Mining and quarrying	7.47	87.0	97.1	137.2	147.3	161.5	176.1	169.1	184.3	190.4	+3.3
Food Manufacturing	13.99	79.6	93.3	117.4	129.3	127.4	122.7	135.6	144.4	147.9	+2.4
Cigarettes	1.49	81.6	86.6	140.6	150.0	156.3	152.3	175.7	205.8	222.5	+8.1
Cotton textiles	32.10	80.1	95.4	103.0	108.5	109.4	115.6	123.3	123.3	119.9	-2.8
Woollen textiles	1.10	70.7	82.1	101.3	107.3	138.5	165.6	128.1	110.1	102.0	-7.4
Synthetic fibres	2.94	64.8	77.2	135.1	144.9	153.9	169.8	211.3	217.9	212.6	-2.4
Jute Manufacturers	5.62	78.8	93.5	99.3	89.6	110.4	117.2	121.0	125.7	105.3	-16.2
Footwear (leather)	0.28	91.5	86.3	144.0	166.0	180.4	214.4	212.2	246.1	265.9	+8.0
Wood and Cork, except furniture	0.24	55.3	87.7	147.8	150.2	169.0	200.2	202.6	236.1	226.7	-4.0
Paper and Paper products	1.39	66.5	95.9	173.4	181.9	190.9	226.8	237.8	255.4	282.3	+10.5
Leather and fur products except footwear and other wearing apparel	0.18	109.5	93.1	115.3	115.6	125.2	149.0	138.4	140.2	136.2	-3.0
Rubber products	3.04	75.4	92.0	141.3	157.4	169.5	197.0	198.1	218.0	217.9	No change

Chemicals and Chemical products . . .	3.56	72.9	96.3	147.7	170.5	184.2	204.1	223.5	235.3	244.9	+4.1
Petroleum products . .	3.79	6.4	77.7	147.7	156.5	169.2	196.6	227.2	231.0	285.9	+23.8
Non-metallic mineral products . . .	2.47	64.4	87.5	168.1	180.8	220.2	204.7	216.0	232.5	230.1	-1.0
Basic metals . . .	9.25	83.5	96.6	183.1	210.7	255.0	292.5	290.2	298.8	315.9	+5.7
Metal products . . .	0.99	54.4	96.5	105.9	152.3	179.1	201.0	225.8	239.8	221.4	-7.7
Machinery, except electrical machinery . .	1.19	45.2	33.3	236.7	268.7	193.2	367.2	411.1	489.7	531.0	+8.4
Electrical machinery apparatus, appliances and supplies . . .	2.41	43.6	71.9	175.9	183.2	211.1	239.1	282.4	313.2	341.6	+9.1
Transport equipments . .	2.86	46.1	73.1	119.4	130.8	151.4	151.2	192.5	207.8	188.4	-9.3
Electricity . . .	3.68	60.9	88.1	171.9	198.8	223.4	297.9	297.2	326.5	355.3	+8.8

Source : Report of the Road Transport Taxation Enquiry Committee, 1967.

ANNEXURE VI

Statement of increases of prices of various items from year 1960 to 1966

Item	1960	1961	1962	1963	1964	1965	1966
<i>Chassis Price—</i>							
Tata M. Benz.	Rs. 33,200	Rs. 33,500	Rs. 34,200	Rs. 37,500	Rs. 39,600	Rs. 42,000	Rs. 44,000
Dodge	30,500	30,500	31,000	33,000	34,000	36,500	37,500
Sales tax	7%	7%	7%	10%	10%	10%	11%
Tyres complete 825 × 20	745	505	510	520	570	640	680
Diesel (per litre)	0.46p	0.51p	0.66p	0.67p	0.67p	0.74p	0.74p
Battery (12 volts)	150	150	175	175	200	350	400
R. T. O. Taxes yearly for R.L.W. 23,750 lbs.	2,000	2,000	2,605	2,650	2,650	2,650	2,800
Goods Tax Yearly	Nil	Nil	800	800	800	800	800
Insurance Premium yearly (full comprehensive)	900	1,435	1,435	1,450	1,600	2,090	2,200
Interest on Hire Purchase (Yearly)	9%	10%	10%	11%	12%	13%	15%

Source : Report of the Road Transport Taxation Enquiry Committee, 1967.

ANNEXURE VII

Average Wholesale Prices of exciseable Commodities (during 1956—57 to 1966-67) used in Road Transport Industry

Kilo-litre from 1960-61

Commodities	Unit	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
(A) Motor Spirit (Petrol)— (Ex-pump in bulk)												
Calcutta	Gallon	2.65	2.97	3.01	3.02	672.54	674.09	674.47	798.17	866.10	856.63	888.47
Delhi	"	2.84	3.17	3.20	3.09	688.58	688.62	689.07	839.34	845.12	870.41	908.39
Madras	"	2.65	2.96	2.99	2.99	661.74	664.23	664.63	788.33	789.50	823.35	858.54
Bombay	"	2.65	2.92	2.97	2.98	657.54	657.64	658.01	801.71	802.80	842.37	873.05
(B) Refined Diesel Oil— ESSO Variety (Bombay)												
	Kilo-litre	..	..	..	..	..	477.35	477.56	606.41	606.41	664.03	N.A.
								606.41 (from March 1963)				
(C) Tyres—												
(i) Dunlop Giant Roadsters 7.00—20—10 ply. rating Calcutta.	Each	232.00	232.00	230.27	246.36	251.96	259.82	399.40 (From November 1962)	433.73	460.57	568.13	610.73
(ii) Dunlop Fort	Each	96.74	96.74	97.36	104.20	106.50	107.37	120.66 (From November 1962)	131.15	139.27	155.86	184.70* As on 25-3-67

Source : Report of the Road Transport Taxation Enquiry Committee, 1967.
Prices are F.O.R. destinations.

ANNEXURE VIII

Prices of Commercial Vehicles in 1962 and 1967

(In Rs.)

	Ex-factory Price		List Price	
	1962 (January)	1967 (July)	1962 (January)	1967 (July)
Truck				
Leyland (176" WB) ..	33,140	42,196	35,575	44,631
	plus excise duty as applicable			
T.M.B. (L 312/42) ..	28,315.25	37,572	30,155.25	39,412
Bedford (179" WB) ..	25,948.25	33,877	27,663.25	35,592
Dodge (165" WB Meadows Engine)	27,556.25	36,578	29,169.25	37,191
Bus				
Leyland (176" WB) ..	33,440	42,836	35,900	44,375
	plus excise duty as applicable			
T.M.B. (LP 312/48) ..	29,941.25	3819	31,906.25	40,284
Dodge (190" WB Meadows Engine)	27,625.25	35,216	29,324.25	36,915

Source : Report of the Road Transport Taxation Enquiry Committee, 1967.



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ANNEXURE IX

Comparative Rates of Freight during the period 1959-60 as received by the Committee from Rajasthan Truck Operators Association, Jaipur

		(In Rupees)								
		Distance both (in miles)								
		1	2	3	4	5	6	7	8	9
1.	Jaipur to Kota and back	300	62.50 225.00	62.50 225.00	62.50 212.50	75.00 200.00	75.00 187.50	75.00 175.00	87.50 162.50	100.00 150.00
	TOTAL		287.50	287.50	275.00	275.00	262.50	250.00	250.00	250.00
	Freight per vehicle mile		0.96	0.96	0.93	0.93	0.92	0.84	0.84	0.84
2.	Jaipur to Ahmedabad and back	900 +	.. +	.. +	350.00 500.00	350.00 500.00	300.00 475.00	300.00 475.00	280.00 450.00	280.00 450.00
	TOTAL		..	..	850.00	850.00	775.00	775.00	730.00	730.00
	Freight per vehicle mile		..	..	0.94	0.94	0.86	0.86	0.81	0.81
3.	Jaipur to Delhi and back	400	175.00 250.00	175.00 225.00	175.00 225.00	175.00 225.00	150.00 200.00	150.00 200.00	150.00 175.00	150.00 175.00
	TOTAL		..	425.00	400.00	400.00	350.00	350.00	325.00	325.00
	Freight per vehicle mile		1.06	1.06	1.00	1.00	0.88	0.88	0.81	0.81
4.	Jaipur to Agra and back	300	112.50 175.00	112.50 175.00	125.00 175.00	125.00 175.00	137.50 150.00	137.50 150.00	137.50 150.00	137.50 150.00
	TOTAL		287.50	287.50	300.00	300.00	287.50	287.50	287.50	287.50

ANNEXURE IX—(Contd.)

	1	2	3	4	5	6	7	8	9
Freight per vehicle mile	.	.	0.96	1.00	1.00	0.96	0.96	0.96	0.96
5. Jaipur to Jodhpur and back	.	400	150.00	150.00	160.00	160.00	160.00	160.00	150.00
	.		250.00	225.00	200.00	200.00	200.00	175.00	175.00
TOTAL	.		400.00	375.00	360.00	360.00	360.00	335.00	325.00
Freight per vehicle mile	.	.	1.00	0.94	0.90	0.90	0.90	0.84	0.81
6. Jaipur to Udaipur and back	.	570	225.00	225.00	200.00	200.00	187.50	187.50	175.00
	.		250.00	250.00	225.00	225.00	200.00	200.00	200.00
TOTAL	.		475.00	475.00	425.00	425.00	387.50	387.50	375.00
Freight per vehicle mile	.	.	0.83	0.83	0.75	0.75	0.68	0.68	0.66

Source : Report of the Road Transport Taxation Enquiry Committee, 1967.

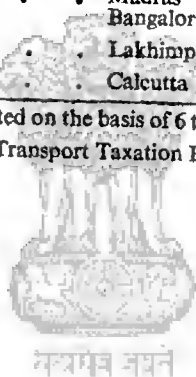
ANNEXURE X

Freight Rates in various Centres as in 1960

		(In Rs.)	
Origin	Destination	Distance (Miles)	Freight per vehicle mile
Bombay	Delhi	800	1.25
	Calcutta	1,181	1.13
	Bangalore	670	1.08
	Madurai	914	1.06
	Nagpur	502	1.29
Delhi	Panipat	52	1.67
	Karnal	73	1.48
	Abohar	231	0.77
	Ludhiana	187	0.76
	Hissar	101	1.30
Madras	Bombay	885	1.14
	Bangalore	215	1.01
	Trichy	200	1.20
	Tuticorin	393	1.13
Dhariwal	Bombay	1,106	1.16
	Calcutta	1,240	1.04
Madurai	Madras	297	0.65
	Bangalore	244	0.95
Kanpur	Lakhimpur	131	1.16
Raniganj	Calcutta	110	1.15

*The rate per vehicle mile calculated on the basis of 6 ton pay load.

Source : Report of the Road Transport Taxation Enquiry Committee, 1967.



APPENDIX

A Study of the Cost of Operation of Transport Vehicles as a determinant of the need for and of the size of viable units

Stage Carriages

1. An analysis of the running cost and average earnings of the Stage Carriages given in the Annexures (statements and graphs) would indicate that the limiting factors which decide the profitability or otherwise of stage carriages are (i) the total daily mileage, (ii) the seating capacity and (iii) the occupancy ratio. Even a single unit organisation would be profitable provided an optimum combination of the three is available. Assuming an average seating capacity of 50 (the seating capacity in Madras being very much higher), the break even point is at about 57% occupancy ratio. As far as mere profitability is concerned, even a single vehicle unit is profitable provided a daily mileage of not less than 170 miles is done and seating capacity is not less than 50 (the fare structure being assumed to be 3 paise per k.m. which is the rate in Madras, the rate in most of the other States being higher). Incidentally if the average daily mileage is less than 170 miles (270 kms.), nothing can save the transport organisation from financial ruin. Even an unit consisting of over thousand vehicles would lose and lose terribly—the loss perhaps would be very much higher due to the top heavy administration. The only factor which should weigh in respect of stage carriages is the question of maintenance of continuous Service, efficient maintenance and prevention of frequent breakdowns and other consequential niceties which any transport organisation worth its name would have recourse to like having spare buses, training programme, passenger amenities and things of the kind.

2. To have a viable unit with efficient break down spare bus service assuring the maximum utilisation of the vehicles at service, a fleet of 8 to 10 buses would be essential as clearly indicated by the expenditure statistics indicated in Annexure A. 9. The capital invested in the maintenance workshop is more than adequately recompensed by the economies effected in the expenditure on repairs, maintenance and the loss of idle or dead vehicle hours.

3. So from a purely restrictive view point of efficient service and not simple profitability, a minimum strength of 8 to 10 buses is necessary. However, for the maximum utilisation of the vehicles at service, a fleet of about 30 is necessary. After all we are concerned not only with the profitability of the venture to the individual operator but also with the general well being of the people of the country, the rapid economic growth and diversification of industries and consequent expansion of employment opportunities. So if adequate workshop facilities are to be provided and the capital invested is to be put to the best use possible utilising in full the capacity of the men and machinery available in the workshop, the optimum size of the fleet should be about 30.

4. A consumer pump for fuel, which could normally cater to the needs of about 25 buses, would go a long way in cutting down the dead mileage and less of time of the vehicle concerned going to and returning from the regular petrol or diesel pump to which they would otherwise have to go. For this purpose also, it would be essential to have a minimum fleet of 25 buses.

5. Other imponderable factors like efficiency, passenger courtesy, self-generating economic viability should also be taken into consideration. We should no doubt examine whether the principles postulated above are actually true in practice. It is common experience in Madras State (I am sure the same would be the case in other States) that where the average size of a fleet is between 25 to 40 in a district, the bus service is most efficient and profitable. The bigger fleet owners are more amenable to discipline and are more serious about implementing the various labour regulations. The fleet is also used as a nucleus for building a sound base for industrialisation and diversification of economic and commercial activities. In districts where there are a large number of small operators, conditions are rather unsettled and frequent breakdowns and poor service are the order of the day.

6. Statistics regarding the cost of operation and income in respect of express buses and buses plying in the city is also appended. In view of the fairly substantial daily mileage the express buses are profitable even at ordinary fare structure. In view of the classification of some of the express buses (particularly those run by the nationalised undertaking) as first class buses (there being four classes of express buses), they are entitled to charge fare at a substantially higher rate. The profit margin is extremely attractive even in respect of express buses charging fares at lower rates with of course a higher seating capacity.

7. As far as city buses are concerned, even at 50% load factor, the break even point is reached at a daily mileage of just about 344 kms. If the daily mileage is 170 kms.,

a day, the break even point is reached at about 70% load factor. At 210 Kms. daily mileage, the break even point is reached at 63%. If the vehicles do not less than 320 kms. a day, the break even point is reached at a load factor of 51½%. The average daily mileage of most city buses is about 150 miles a day (240 kms.). For this daily mileage, the break even point would be around 59% load factor.

8. A word of caution is necessary. As the appended statistics and graphs would show, profitability and viability are linked to the seating capacity, daily mileage and load factor. Bus operation would be profitable even with lower occupation ratio if the seating capacity is higher. Higher daily mileage would off set other factors. Thus profitability is a complex function of different variables like seating capacity, occupation ratio, daily mileage, vehicle utilisation, reduction of maintenance costs, reduction of establishment costs, etc. These facts vary from State to State depending upon the conditions in the State — condition of roads, traffic potential, economic well being of the people, Government policies regarding rules relating to Bus Transport administration and the enterprise, efficiency and the ingenuity of the operators and also the industrial base that is available regarding ancillary industries and maintenance, as well as major repair facilities. It is noticed that the daily mileage in many of the northern States is well below hundred. Unless a rationalisation programme of bringing up the daily mileage to 170 miles and above per day is pushed through as in some of the advanced States like Madras, no amount of fuss would make any of the existing units viable in an economic sense. As far as seating capacity is concerned, the pattern is more or less the same throughout India barring a few exceptions here and there. The only variable factor is the daily mileage. As the first step is simultaneous with the consideration of the question of viable units an intensive drive should be organised to see that maximum utilisation is made of the existing transport facilities by increasing the daily mileage in respect of the buses, increasing the seating of the buses consistent with certain minimum comforts, reorganisation of the routes to make them more rational and incidentally remunerative, improving the condition of the roads and if possible reducing the burden of tax both State levies and Central Excise duties on the transport vehicles.

Goods Vehicles

9. As far as goods vehicles are concerned, the average running cost as indicated in the Annexure B comes to Rs. 1.19 paise per mile if the entire capital invested belongs to the operator. It is Rs. 1.16 paise if the operators resort to hire purchase finance. The normal freight rate prevailing in Madras is on an average Rs. 1.25 paise per lorry mile. It would be seen that the margin of profit would be about 6 paise per mile if the entire capital has been invested by the operator himself and 9 paise per mile if hire purchase finance has been used. The average profit which would accrue to the operator comes to Rs. 3,200/- per year where the entire capital comes from the operator and Rs. 4,800/- if hire purchase finance has been used. While the position cannot be said to be bad where the operator is able to put forth the entire capital himself, the net return being about 8% of the invested capital over and above the interest on capital, where the operator has to get his capital from hire purchase financier even though on paper he gets 28% interest, he is in the unenviable position of having to repay the borrowed capital at the rate of Rs. 12,000/- per year for the first two years from out of his actual return of about Rs. 4,800/- per year. While from purely income tax computation point of view, it is not necessary for any allowance to be made for the repayment of loan in the expenditure, from a pure economic or human point of view, it is necessary that an industry or a commercial operation should be so designed as to provide for repayment of borrowed capital also. Otherwise the industry would be placed in the awkward situation of having to depend on borrowed capital every five years or so in order to replace the vehicles in operation or the operator must be resigned to the fate of not taking anything from the earnings apart from meagre cost of management of Rs. 250/- a month which has been taken into account in computing the average running cost of vehicle. The present wide, but unfortunate practice is to repay the loan from out of the depreciation reserve fund and eke out a hand to mouth existence and sometimes not a particularly austere one on the remaining earnings, without bothering about the future development of the transport organisation or the replacement of the existing vehicles.

10. The majority of the operators in almost all the States are single lorry operators who have to depend to a great degree on hire purchase financiers for running their transport service. It is therefore necessary that a solution should be found for rescuing them from this dilemma of eternal dependence on the hire purchase financiers. One way this can be done is by increasing the freight structure by say another 10 paise per mile. How for this would be practicable in fiercely competitive field is highly doubtful. While the common complaint is that heavy taxation is imposing a frightful burden on the operators an analysis of the cost structure would indicate that motor vehicles tax by itself forms a very insignificant portion of the overall running cost. The sales tax and excise duty on fuel

and spare parts not to speak of those on the chassis and body are however quite substantial. There might perhaps be some scope for reduction in the tax burden in respect of these essential raw materials on which the very existence of transport industry is centred; but in the present context of massive five year plans of the order of Rs. 21,000/- crores and more, whether there is any possibility of tax reduction is highly debatable.

11. The only way open is for the industry to help itself by having larger units which would help to reduce the overhead expenditure on management and the staff, leave and off duty salary for drivers and reduction in the overall strength of drivers and cleaners. By having at least a minimum fleet of five vehicles, it would be possible to effect a saving of not less than Rs. 5,000/- in the running cost per year per vehicle. The rationale behind this is as follows :—

For One Vehicle	.	.	.	.	2 drivers are necessary
For two Vehicles	.	.	.	.	3 drivers are necessary
For three vehicles	.	.	.	.	5 drivers are necessary
For four vehicles	.	.	.	.	6 drivers are necessary
For five vehicles	.	.	.	.	7 drivers are necessary.

This applies to the number of cleaners also. As far as office and garage are concerned, whether there is one vehicle or five vehicles, the management and staff would be the same, i.e. in other words whether the strength of the fleet is one or five, management expenditure would be constant. The saving by way of this would be Rs. 2,400/- per lorry. As a result of the increase of the number of vehicles in the fleet not resulting in increase in the strength of drivers in direct proportion, it being almost an arithmetic progression, the saving would come to about Rs. 1,500/- per vehicle. Saving in leave salary, bata to drivers and cleaners, provident fund contributions and other administrative charges would be about Rs. 1,100/-, as a result of employing 7 drivers and 7 cleaners for five lorries instead of employing two drivers and two cleaners per lorry. Thus there would be a total saving of Rs. 5000/- per year.

12. The maintenance of a garage with a certain minimum workshop facilities would not only reduce the cost of repairs and expenditure on fuel and tyre but would also reduce the number of days the vehicles have to be off the road due to break downs, etc. In a fleet of three to four lorries, the cost of investment and expenditure on the maintenance of a garage would be completely balanced by the saving effected in repair and maintenance charges. This would also have the effect of reducing the idle vehicle hours and increasing the vehicle utilisation thereby contributing to the establishment of a higher degree of efficiency in the transport organisation. The detailed note and the statement in the annexures B.3 to B.6 would indicate how the maintenance of a garage results in considerable saving of expenditure. The garage and workshop would be utilised to the maximum extent possible if 10 vehicles are attached to the garage. The overall saving even after meeting the expenditure on the garage would be about Rs. 4,150/- per lorry per year. So the cumulative saving (saving consequent on pooling of drivers and cleaners and provision of garage facilities) would be about Rs. 9,150/- per year. As pointed out earlier, the normal return would be about Rs. 4,800/- per year from a lorry. Taking the saving effected as a result of having a fleet of 10 vehicles with a garage and a maintenance workshop, the overall income would increase to about Rs. 14,000/- per year. This would be definitely adequate for the repayment of borrowed capital or hire purchase finance and ensure reasonable funds for an austere living for the first two years. Once the hire purchase finance is repaid, the operation would become quite attractive. It therefore follows that the optimum size of a fleet of lorries should be at least 10 vehicles to ensure prudent and safe economic viability. This would also off set the fluctuations in freight rates below Rs. 1.25 per lorry mile. What is more this viable unit of 10 lorries would become the nucleus for organising parcel service (small or whole lorry). Parcel services would also facilitate imposition of higher tariff in the interest of transport operation.

13. A scrutiny of the graph showing the various freight rates, gross income and expenditure of fleets of various sizes and for varying daily mileage would indicate (i) that the greater the daily mileage the larger the margin of profit (ii) a single lorry owner breaks even at a daily mileage of 226 kms. if the freight rate is Rs. 1.25 per mile and at 425 kms., if the freight rate is Rs. 1/- per mile. On the other hand a unit containing ten lorries breaks even at 257.5 kms. even at a freight rate of Rs. 1/- per mile and the break even point is at 169 kms., if the freight rate is at Rs. 1.25 per mile.

14. The optimum mileage and the optimum freight rate should be such as to provide for about fifteen thousand rupees income per year so that the hire purchase finance could be repaid without any difficulty, at the same time leaving behind a reasonable margin

for the survival of the operator. If this is the criterion then a single lorry owner (operator) can never survive at a freight rate of less than Re. 1/- a mile and his optimum earnings at a freight rate of Re. 1/- per mile would come at a daily mileage of about 650 kms. which is practically impossible. It is about 360 kms. (225 miles) if the freight rate is at Rs. 1.25. On the other hand, a ten lorry unit at Re. 1/- a mile, reaches the optimum at about 410 kms. which is equal to 256 miles. At a tariff of Rs. 1.25 the optimum is reached at 275 kms. which is equal to about 165 miles.

15. This study would indicate that apart from the unit size, the greater determinant is the guarantee regarding loads over substantial distance. This definitely would not be possible for a single lorry operator who has to be at the mercy of brokers. Only bigger lorry operators with booking offices and things of the kind can ensure that none of their lorries suffers for want of suitable loads and that there are no idle lorries.

16. In this context, the question of forming co-operative booking agencies for the benefit of smaller lorry operators should also be considered. In such booking offices, the principle of "first come first served" should be scrupulously followed. This could be done after outlawing the present brokers who are merely functioning as parasites on the poor and ignorant smaller lorry operators.

17. The question of amalgamating smaller units into bigger size in a loose form of association should also be attempted in order to pass on the benefits of larger combinations to smaller units. Some of the transport companies which take vehicles on a charter basis are fulfilling this to a limited extent. Where private operators function on these lines, while the benefits of higher and regular load is passed on to the smaller operators, the full monetary benefit is hardly ever conveyed. Well organised Co-operative societies of smaller operators themselves alone could ensure this arrangement to the mutual benefit of the society and the smaller operators.

18. The graph also indicates how at lower tariff long distance haulage is more profitable than shorter hauls. This explains why higher freight rate is demanded for shorter hauls.

19. The calculations in paras 11 and 12 would generally apply to lorries operating within a radius of 250 miles. The difference in the levels of taxation between various States is more than balanced by the increase in the maintenance charges consequent on the condition (mostly poor) of the roads in some of the States which levy a lower rate of tax. So this is strictly speaking not an independent variable factor in working out the cost of operation. Where the radius of operation is over 250 miles, it may be necessary to have another set of maintenance workshop and garage which on an average would involve additional expenditure of 10 paise per mile for a fleet of five. If this extra expenditure has to be reduced in order to meet the competition from other lorry operators in the area, long distance lorry operators would have to increase the strength of the unit so that the economy so effected may offset the increased expenditure involved in long distance haulage. By the same reasoning adopted for fixing the size of viable units operating within a radius of 250 miles, it would be necessary to increase the optimum strength of the unit from ten to fifteen vehicles if the area of operation is to go beyond a radius of 250 miles. Where the area of operation goes beyond a radius of 500 miles, optimum size would be a fleet of 20 vehicles and so on. Inter-State routes would definitely come under this category.

20. The way the operators having recourse to hire purchase finance have managed to survive can only be attributed to the fact that they have indulged in overloading to compensate for the low margin of profit involved. This of course is not in strict accordance with the letter of law. This study also indicates why parcel services are more popular with operators. Parcel services have the double advantage of higher freight structure and the benefit of having a larger fleet (more than the minimum viable unit considered here), which incidentally is the *sine quo non* for a parcel service. In this context it is desirable that the question of increasing the payload of the transport vehicles should be considered. As the experience in West Bengal and Orissa has indicated the running costs are lower where the payload is of the order of 15 tonnes and more. There is no point in claiming that we are an advanced country, unless our roads and bridges are strengthened to take heavy loads. (my own feeling is that they are already strong enough to take higher payload vehicles and are actually being used on the sly). A greater recourse should be had to the use of articulated vehicles and truck trailers which not only increase the payload but provides for the greater and more intensive utilisation of the existing prime movers in the country. Even in the so-called advanced State of Madras, the total number of truck trailers has not even reached the three figure mark.

21. The conclusions which flow from the above analysis are therefore as follows:--

1. The optimum and desirable size of stage carriages (buses) consistent with efficiency would be about thirty to forty.
2. The optimum size of a fleet of goods vehicles operating within a radius of 250 miles for the economic survival and self-generating economy would be ten.
3. The optimum size of a fleet of goods vehicles on inter-State routes beyond a radius of 250 miles and within a radius of 500 miles would be fifteen.
4. The optimum size of a fleet of goods vehicles operating beyond a radius of 500 miles and within a radius of 750 miles would be twenty.

Road haulage beyond 750 miles would not be worthwhile unless small articles are to be transported and the articles require very careful handling—e.g. Radios, Electrical Equipment, Glass-ware, Fruits, etc. Otherwise rail transport would be more competitive than road transport.

Taxis

22. As far as taxi cabs are concerned, the best run, efficient and most profitable units are those operated by owner drivers. So the single cab unit is the most viable one.

General

23. As in textile industry, composite units are more economical, remunerative and efficient than independent units. Where the operator runs both passenger transport and goods transport services efficient coordination and profitable and full utilisation of men and material is possible. This guarantees both the economic viability and profitability of the organisation. It is also possible to switch over vehicles used as buses for a few years, as goods vehicles, cutting down the capital outlay, allowance for depreciation etc. Workshop (repair and maintenance) facilities would also be better utilised. It might be possible to build up a stock of spare parts also. If conditions are favourable, it would even be possible to embark on sale of spare parts, retreading etc. on a co-operative basis. If the experience in South India (where there are many such composite units) is any indication composite units catering to both passenger and goods needs with a sound base of workshop facilities and spare parts distribution business are in a much better position to deliver the goods (the pun is wholly unintentional). This combination is a very fruitful and welcome one both from the point of the operator and the man in the street who is the ultimate beneficiary of all transport development.

24. One sure and successful way of forming viable units, other than one of publicity regarding what is necessary in the enlightened self-interest of the operators, would be to offer institutional finance, provision of spare parts, import licences under actual users quota, a slight token tax cut and the additional inducement that inter-State permits would be given only to members of viable units.

SD- V. SANKARAN I.A.S.

*Secretary of the Transport Commissioner
Ex-Officio Joint Transport Commissioner,
Madars.*

Enclosure :

ANNEXURE A

*Running Cost : Working Sheet of a Route Bus 55 Passenger Capacity
During 270 kilometres per day 323 Days Working Days in a
Year (Annual Mileage 54,156 of 87,210 Kms.)*

Cost of Chassis	Rs. 37,000·00
Cost of Body	Rs. 17,000·00
TOTAL COST	54,000·00

Fixed Charges for 1 Year

(a) Depreciation at 20% per year on Rs. 49,445 (Rs. 54,000 total cost less one set of tyres cost Rs. 4555 for 1 year)	Rs.	Rs.	Rs.
	9,889·00		
(b) Pay of 2 drivers at Rs. 118 per month for 1 year	2,832·00		
(ii) Pay of 2 conductors at Rs. 103 per month for 1 year	2,472·00	15,193·00	19·87%

Taxation and Insurance

(i) Tax under M.M.V.T. Act at Rs. 40 per seat for 55 seats for 1 year	8,800·00		
(ii) Tax under TPG Act. at Rs. 25 per seat for 55 seats for 1 year	5,500·00		
(iii) Insurance (Basic Rs. 415+on the value of vehicle less 10% for the fleet +2·50 per passenger for risk less 20% for no claim amounting Rs. 603·20 per year)	603·20	14,903·20	19·49%

Variable Charges

Cost of fuel at 4·5 Kms. per litre at 80 nP. per litre for 1 year (87210 Kms. per year.)	15,488·00		
Cost of engine oil at 320 Kms. per litre at Rs. 2·20 per litre on 87210 Kms. for 1 year	599·60	16,087·60	

Taking 48000 miles per set of 6 tyres (cost Rs. 4555·75 plus twice retreading at Rs. 678 each Rs. 5911·75) for 54156 miles. $5911·75 \times 54156$	6,916·38		
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48000			
16 batteries (8 sets) at Rs. 242 each for 5 years (3872)	774·40		

5

Servicing charges at 24 ordinary per year at Rs. 14 and 25 lubricating per year at Rs. 37·50 for 1 year	Rs. 1,236·00		
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Repair charges for 1 year	Rs. 8,300.00		
	Over-Head Charges		
Office and Garage rent at Rs. 150 p.m.	Rs. 1,800.00	Rs.	Rs.
Management, office staff pay etc., per month	6,000.00		
Stationery and postal charges Rs. 225 per year	225.00		
Bata for conductors at Rs. 2.50 per day for 1 year	807.50		
Bata for drivers at Rs. 3.00 per day for 1 year	969.00		
Bus stand fees and way-side expenses at Rs. 1.75 per day for 1 year	565.25		
Leave and off duty pay at 20% on the pay of drivers and conductors for 1 year	530.40		
Provident Fund at 6½% on the salary of drivers and conductors for 1 year	165.75	11,062.90	14.43%
GRAND TOTAL		74,473.48	
Un-expected Contingencies		2,000.00	
TOTAL		76,473.48	
Interest at 12% on the invested capital of Rs. 24,000 per year	2,880.00	Interest on Depreciation reserved of 20% per annum of the capital.	
For 5 years (2880 × 5)	14,400.00		
Borrowed capital of Rs. 30,000 at 12% interest plus 1% financing commission and Rs. 150 for contingencies	Rs. 7,650.00	On 1st year's depreciation Rs. 10800 interest at 12% for 4 years.	5,184
		On 2nd year's depreciation Rs. 10800 interest at 12% for 3 years.	3,888
		On 3rd year's depreciation Rs. 10800 interest at 12% for 2 years.	2,592
		On 4th year's depreciation Rs. 10800 interest at 12% for 1 year.	1,296
	22,050.00		12,960
Deficit interest amounts Rs. (—) 22,050.00—(+) Rs. 12,960 = Rs. (—) 9,090			
Average deficit interest per year : Rs. 9,090.00		= Rs. 1818	

Total Running Cost after adding deficit interest	Rs. [76,473.48 — 1,818.00	Rs. [78,291.48
Actual Resale value of the vehicle at the end of 5th year	17,500	
Average on resale value per year	<u>17,500</u> 2	[3,500.00
Total running cost after deducting resale value	<u>78,291.48</u> — 3,500.00	[74,791.48
Average Running Cost per mile	<u>74,791.48</u> 54,156	= 1.38



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ANNEXURE A-1

Stage Carriage

Interest on Capital less interest on Depreciation Reserve Amount invested.
by operator Rs. 54,000.

For 3 Years

Interest on Rs. 54,000 at 12% for 3 years.		Depreciation at 33½% per annum	
$54000 \times 12 \times 3$	=	Rs.	Rs.
100		19,440.00	
		On 1st year's depreciation Rs. 18,000 interest at 12% for 1 years	4,320
		On 2nd year's depreciation Rs. 18,000 interest at 12% for 1 year	Rs. -2,160
		19,440.00	Rs. 6,480

Deficit Interest Rs. (-) 19,440.00 - (+) Rs. 6,480.00 = Rs. 12,960 (-)

Deficit Interest per year : Rs. $\frac{12,960}{3}$ = Rs. 4,320.00

For 4 Years

Interest on Rs. 54,000 at 12% for 4 years.		Depreciation at 25% per annum	
$54000 \times 12 \times 4$	=	1st year's depreciation Rs. 13,500 interest at 12% for 3 years	4,860
100		25,920	
		On 2nd year's depreciation Rs. 13,500 interest at 12% for 2 years	3,240
		On 3rd year's depreciation Rs. 13,500 interest at 12% for 1 year	1,620
		25,920	9,720

Deficit Interest for 4 years :

25,920 (-) - 9,720 (+) = 16,200 (-)

Deficit Interest for 1 year :

16,200 (-) = 4,050.00

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For 5 Years

Interest on Rs. 54,000 at 12% for 5 years.		Depreciation at 20% per annum.	
$54000 \times 12 \times 5$	=	On 1st year's depreciation Rs. 10,800 interest at 12% for 4 years.	5,184.00
100		32,400	
		On 2nd year's depreciation Rs. 10,800 interest at 12% for 3 years	3,888.00
		On 3rd year's depreciation Rs. 10,800 interest at 12% for 2 years	3,592.00
		On 4th year's depreciation Rs. 10,800 interest at 12% for 1 year	1,296.00
		32,400	12,960.00

Deficit Interest for 5 years :	Rs. 32,400 (—)	Rs. —12,960 (+)	Rs. =19,440·00 (—)
Deficit interest for 1 year :	19,440·00	Rs. 3,888·00	

5

For 6 Years

Interest on Rs. 54,000 at 12% for 6 years.		Depreciation at 16 $\frac{2}{3}$ %.	
$\frac{54,000 \times 12 \times 6}{100}$	= 38,880·00	On 1st year depreciation Rs. 9,000 interest at 12% for 5 years	5,400·00
		On 2nd year's depreciation Rs. 9,000 interest 12% at for 4 years	4,320·00
		On 3rd year's depreciation Rs. 9,000 interest at 12% for 3 years	3,240·00
		On 4th year's depreciation Rs. 9,000 interest at 12% for 2 years	2,160·00
		On 5th year's depreciation Rs. 9,000 interest at 12% for for 1 year	1,080·00
	38,880·00		16,200·00
Deficit interest for 6 years : Rs. 38,880—Rs. 16,200·00=Rs. 22,680·00 (—) (—) (—)			

Deficit Interest for 1 year=Rs. 22,680·00
=Rs. 3,780·00

6

For 7 Years

Interest for 7 years on Rs. 54,000 at 12%		Depreciation 14 $\frac{2}{7}$ %	
$\frac{54,000 \times 12 \times 7}{100}$	= 45,360·00	On 1st year's depreciation Rs. 7,714 $\frac{2}{7}$ interest at 12% for 6 years	5,554 $\frac{2}{7}$
		On 2nd year's depreciation Rs. 7,714 $\frac{2}{7}$ interest at 12% for 5 Years	4,628 $\frac{4}{7}$
		On 3rd year's depreciation Rs. 7,714 $\frac{2}{7}$ interest at 12% for 4 years.	3,702 $\frac{6}{7}$
		On 4th year's depreciation Rs. 7,714 $\frac{2}{7}$ interest at 12% for 3 years	2,777 $\frac{1}{7}$
		On 5th year's depreciation Rs. 7,714 $\frac{2}{7}$ interest at 12% for 2 years	1,851 $\frac{3}{7}$
		On 6th year's depreciation Rs. 7,714 interest at 12% for 1 year	925 $\frac{5}{7}$
	45,360·00		19,440·00

Deficit Interest : Rs. (—) 45,360·00—(+) Rs. 19,440·00=Rs. 25,920·00 (—)

Deficit interest for one year Rs. 3,703.

ANNEXURE A-2

Interest on Capital in Respect of Stage Carriages Purely Financed by the Operator and Partly Financed by the Operator and Partly by Hire-Purchase

A. On own investment Rs. 54,000		Depreciation amount at 20% on the capital and interest on depreciation.	
Interest at 12% for 5 years	Rs.	On 1st Year's depreciation Rs. 10,800 interest at 12% for 4 years	Rs. 5,184.00
$54,000 \times 12 \times 5$	= 32,400	On 2nd year's depreciation Rs. 10,800 interest at 12% for 3 years	3,888.00
100		On 3rd year's depreciation Rs. 10,800 interest at 12% for 2 years	2,592.00
		On 4th year's depreciation Rs. 10,800 interest at 12% for 1 year	12,96.00
	Rs. 32,400		12,960.00
			1,2960.00
Deficit interest : (—) R. 32,400.00 — (+) Rs. 12,960.00 = (—)Rs. 9,440.00			
B. On own investment of Rs. 24,000 and borrowed amount Rs. 30,000			
On own investment Rs. 24,000		Depreciation amount 20% and interest.	
Interest on 24,000 at 12% for 5 years.		On 1st year depreciation Rs. 4,800 interest at 12% for 4 years	2,304
$24,000 \times 12 \times 5$	= Rs. 14,400.00	On 2nd year's depreciation Rs. 4,800 interest at 12% for 3 years	1,728
100		On 3rd year's depreciation Rs. 4,800 interest at 12% for 2 years	1,152
		On 4th year's depreciation Rs. 4,800 interest at 12% for 1 year	576
	Rs. 14,400		5,760
On the hire-purchase amount of Rs. 30,000.00			
Interest on the borrowed amount at 12% plus 1% financing commission and Rs. 150/- for contingencies		On 1st year's depreciation Rs. 6,000 interest at 12% for 4 years	7,280
	18540	On 2nd year's depreciation Rs. 6,000 interest at 12% for 3 years	2,160
		On 3rd year's depreciation Rs. 6,000 interest at 12% for 2 years	1,440
		On 4th year's depreciation Rs. 6,000 interest at 12% for 1 year	720
	32,850.00(—) 12,960.00(+) 19,890.00(—)		
Deficit interest :	32,850		12,960

ANNEXURE A-3

*Running Cost—Working sheet of express bus service 36 passengers
doing 400 kilometers a day (per year of 223 days, 1,29,200 Kms.
per year or 80,233 milles)
(Leyland)*

	Rs.
Cost of Chasis	47,000-00
Cost of Body	22,000-00
TOTAL COST	69,000-00
Fixed Charges	
(a) Average depreciation per year taking (69,000—5,160 for 5 years) $63840/5$	12,768-00
(b) Pay of 2 Drivers at Rs. 118 each per month for 1 year	2,832-00
(ii) Pay of 2 Conductors at Rs. 103 per month for 1 year	2,472-00
	18,072-00
Taxation and Insurance	
Tax at Rs. 45/- per seat per quarter on 36 passengers per year	6,480-00
Surcharge at Rs. 25/- per seat per quarter on 36 passengers per year	3,600-00
Insurance	617-00
	10,697-20
Cost of fuel at 4 Kms. per litre at 80 nP. per litre on 1,29,200 kms. per year	25,840-00
Cost of engine oil at 400 Kms. per litre at Rs. 0-80 nP. per litre on 1,29,200 kms.	888-25
	26,728-25
Taking cost of tyres at Rs. 5,160+retread charges twice at Rs. 738= Rs. 6,636-00 for 54,000 miles for 80,233 miles per year	9,927-75
Cost of 8 batteries at Rs. 242/-	1,936-00
	Rs. 11,863-75

	Rs.
Servicing 40 ordinary and 40 lubricating charges at Rs. 14/- and Rs. 37.50 respectively	2,060.00
Proportionate repair charges taking 8300 for 270 kms. per day. ($8300 \times 400/270$)	12,300.00
	<u>14,360.00</u>

Over Head Charges

	Rs.
Office and garage rent per month	150.00
Pay of Permanent staff per month	500.00
Stationery and Printing per month	21.00
Bata for drivers at Rs. 3.50 per day	105.00
Bata for conductors at Rs. 3 per day	90.00
Bus stand fees and way-side expenses at Rs. 2/- per day	60.00
Leave and off duty pay 20% of driver's and conductor's pay	88.40
Provident Fund 6-1/4 % of pay of drivers and conductors	27.60
	<u>1,042.00</u>

	Rs.
Over-Head Charges per year Rs. 1,042.00 \times 12	12,504.00

GRAND TOTAL	94,225.20
Un-expected contingencies	<u>2,000.00</u>

Total Running Cost per year at 80233 miles	<u>96,225.20</u>
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Interest at 12% on the invested capacity of Rs. 30,000 for 5 years ($39000 \times 12\% \times 5$)	23,400	Interest on Depreciation reserve on 20% per annum.	Rs.
		On 1st year's depreciation Rs. 13,800	6,624
Borrowed capital of Rs. 30,000 at 12% for 2 years	7,200	Interest at 12% for 4 years	
1/2% Commission at the value of the vehicle	345	On 2nd year's depreciation Rs. 13,800 interest at 12% for 3 years	4,968

Contingency

150

On 3rd year's depreciation
Rs. 13,800 interest @ 12%
for 2 years 3,312
on 4th year's depreciation
Rs. 13,800 interest @ 12%
for 1 year 1,656

Rs.	<u>31,095</u>	Rs.	<u>16,560</u>
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Deficit interest for 5 years : Rs. 31,095.00—Rs. 16,560.00=Rs. 14,535.00
Rs. 14,535.00

Deficit Interest for 1 year : $\frac{Rs. 14,535.00}{5} = Rs. 2,907.00$

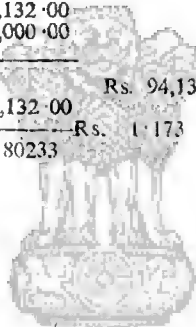
Total Running Cost after adding	96,132.20	
	+2,907.00	
	<u>Rs. 99,132.00</u>	

Actual Resale value of the
vehicle at the end of 5th
year
Rs. 25,000.00
Rs. 25,000.00

Average on resale value per year. $\frac{Rs. 25,000.00}{5} = Rs. 5,000.00$

	Rs.
Total Running Cost after deducting resale value .	99,132.00
	<u>-5,000.00</u>
	<u>Rs. 94,132.00</u>

Running Cost per mile	$\frac{94,132.00}{80233}$	Rs. 1.173
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ANNEXURE A-4

*Running Cost—Working Sheet of Express Bus Service 40 Passengers
doing 400 Kilometres a day (per year of 323 days, 1,29,200 Kms. per
year or 80,233 Miles) (Leyland)*

	Rs.
Cost of Chassis	47,000·00
Cost of Body	22,000·00
TOTAL COST	69,000·00

Fixed Charges

(a) Average depreciation per year taking (69000—5160) for 5 years (63,840/5)	12,768·00	
(b) Pay of 2 Drivers at Rs. 118 each per month for 1 year	2,832·00	
(ii) Pay of 2 Conductors at Rs. 103 per month for 1 year	2,472·00	
		Rs. 18,072·00

Taxation and Insurance

Tax at Rs. 45/- per seat per quarter on 40 passengers per year	7,200·00	
Surcharge at Rs. 25/- per seat per quarter on 40 passengers per year	4,000·00	
Insurance	627·20	
		Rs. 11,827·20
Cost of fuel at 4 Kms. per litre at 80 nP. per litre on 1,20,200 Kms. per year	25,840·00	
Cost of Engine oil at 400 Kms. per litre at Rs. 2·20 nP. per litre on 1,20,200 Kms.	888·25	
		Rs. 26,728·25

Taking cost of tyres at Rs. 5,160+retread charges twice at Rs. 733, Rs. 6,636·00 for 54,000 miles for 80,233 miles per year	9,927·75	
Cost of 8 batteries at Rs. 242/-	1,936·00	
		Rs. 11,863·75

Servicing 40 ordinary and 40 lubricating charges at Rs. 14/- and Rs. 37·50 respectively	2,060·00	
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Proportionate repair charges taking 8300 for 270 Kms per day. (8300×400/270)	12,300·00	
		Rs. 14,360·00

Over-Head Charges

	Rs.		Rs.
Office and garage rent per month	150.00		
Pay of Permanent staff per month	500.00		
Stationery and printing per month	21.00		
Bata for drivers at Rs. 3.50 day	105.00		
Bata for conductors at Rs. 3.00 per day	90.00		
Bust stand fees and way-side expenses at Rs. 2 per day	60.00		
Leave and off duty pay 20% of driver's and conductor's pay	88.40		
Provident Fund 6½% of pay of drivers and conductors	27.60		
	<u>1,042.00</u>		
Over-Head charges per year Rs. 1,042.00 × 12	12,504.00		
Total	95,355.20		
Unexpected contingencies	<u>2,000.00</u>		
Total Running Cost per year at 80,233 miles	<u>97,355.20</u>		
Interest at 12% on the invested capital of Rs. 39,000 for 5 years (39000 × 12% × 5)	23,400	Interest on depreciation amount at 20% per annum.	
Borrowed capital of Rs. 30,000 at 12% for 2 years	7,200	On 1st year's depreciation Rs. 13,800 interest at 12% for 4 years.	Rs. 6,624
½% commission and value of the vehicle	345		
Contingency	150	On 2nd year's depreciation Rs. 13,800 interest at 12% for 3 years	4,968
		On 3rd year's depreciation Rs. 13,800 interest at 12% for 2 years	3,312
		On 4th year's depreciation Rs. 13,800 interest @12% for 1 year	1,656
	<u>Rs. 31,095</u>		<u>Rs. 16,560</u>
Deficit interest for 5 years : Rs. 31,095—Rs. 16,560.00 =Rs. 14,535.00(—)			

Average Deficit interest per year

(—)Rs. 14,535

5

—Rs. 2,907·00(—)

Total Running Cost after adding deficit interest	97,355·20
	+2,907·00
	<u>Rs. 1,00,262·20</u>

Actual resale value of the vehicle at the end of 5th year 25,000

Average on resale value per year

Rs. 25,000

5

= 5,000

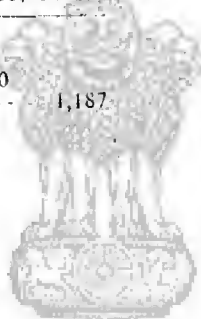
Total Running Cost after deducting resale value	1,00,262·20
	—5,000·00
	<u>95,262·20</u>

Running Cost per mile.

Rs. 95,262·20

80233

1,187



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ANNEXURE A-5

Collections of express stage carriage per year 323 working days with daily mileage of 400 Kilometres and at 5-00 nP. Kilometre per passenger

Percentage										36 seater	40 seater
										Rs.	Rs.
100%	.	.	.	.	.	.	.	.	.	2,32,560	2,58,400
90%	2,09,304	2,32,560
80%	1,86,048	2,06,720
70%	1,62,792	1,80,880
60%	1,39,536	1,55,040
50%	1,16,260	1,29,200



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ANNEXURE A-6

*Running Cost--Working sheet in respect of a stage carriage city Service
(36 sitting and 25 standing buses) doing 270 Kilometres a day (87210)
Kilometres or 54156 Miles a years).*

Cost of Chassis and Body	Rs. 54,000	Rs.
Fixed Charges For 1 Year		
Average Depreciation vehicle taking Depreciation at 25% (54,000 - 4,555 = 49,445/4 = 12,361)	12,361	
In city vehicles in view of the greater wear and tear higher depreciation rate is adopted		
Pay for a year of 2 Drivers at Rs. 118/- each per month	2,832	
Pay for a year 2 Conductors at Rs. 103/- each per month	2,472	
		17,665.00
Taxation		
Tax for one year on 36 sitting at Rs. 33/- per seat per quarter. $36 \times 33 \times 4$	Rs. 4,752	
Tax for a year for 25 standing passengers. $(25 \times 33 / 25 \times 33 / 3/4)$	1,100	
Surcharge for 36 seated passengers $(36 \times 25 \times 3)$	3,600	
Surcharge for 25 standing Passengers $(25 \times 12.50 \times 4)$	416.70	
3		9,868.70
Variable Charges		
Per year cost of fuel 10% above the normal of 4.5 Kilometres per litre at 80 nP. per litre for 87,210 Kms.	17,036.80	
Per year cost of Engine Oil 10% above the normal of 320 Kms. per litre at 2.20 per litre on 87,210 Kms.	659.56	
	17,696.36	
Taking the cost of one set of tyres 4,555.95 + 678 each for two retreads for a mileage of 48,000 miles for 54,156 miles	6,916.38	6,916.38
Cost of Battery per year taking 8 sets for 5 years at 484 per set		
(484 x 8/5)	Rs. 774.40	Rs. 774.40
24 ordinary and 24 lubricating services at Rs. 14 and Rs. 37.50 respectively each	1,236.00	
Repair charges per year	8,300.00	

Other Charges	11,032·00	9,536·00
		<u>11,032·00</u>
		72,488·84
Unexpected contingencies		<u>2,000·00</u>
		<u>75,488·84</u>

Interest for 4 years (24000 × 12 × 4/100)	11,920·00
Interest for 2 years (30,000 × 12 × 2/100) Rs. 7,200 } Contingencies Rs. 150 } Commission Rs. 270 }	7,620·00
TOTAL	19,540·00

Interest on depreciation reserve of 25% per year of the capital

On 1st year depreciation Rs. 13,500 interest at 12% for 3 years	$\frac{13500 \times 12 \times 3}{100}$	4,860·04
On 3rd year's depreciation Rs. 13,500 interest at 12% for 2 years	$\frac{13500 \times 12 \times 2}{100}$	3,240·00
On 3rd year's depreciation Rs. 13,500 interest at 12% for 1 year	$\frac{13500 \times 12 \times 1}{100}$	1,620·00
		<u>9,720·00</u>

Deficit Interest for 4 years : Rs. 19,540·00—Rs. 9,720·00 = Rs. 9,820·00.

Deficit Interest for 1 year : $\frac{9,820·00}{4}$ = Rs. 2,455·00

Average deficit interest after Rs. 75,488·84 + Rs. 2,455·00 = Rs. 77,943·84
Adding deficit interest

Average resale value of vehicle $\frac{\text{Rs. } 20,000}{4}$ = Rs. 5,000·00

Total Expenditure Rs. 77,943·84—Rs. 5,000·00 = Rs. 72,943·84.

Running Cost per mile $\frac{72,943·84}{54,186}$ = Rs. 1·347.

ANNEXURE A-7

City Service

Taking length of the city route as 10 Kms.

Each stage taken as 2 Kms. and 5 stages for the route.

Fare for the first stage 10 nP. and the remaining 4 stage at 4 nP. each total for Kms.—26 nP.

Taking the daily mileage as 150 Kms. a day, number of singles $\frac{150}{10} = 15$ per day.

Taking the daily mileage as 210 Kms. number of single performed per day $\frac{210}{10} = 21$.

Taking the daily mileage as 270 Kms. number of single performed $\frac{270}{10} = 27$.

Taking the daily mileage as 320 Kms. number of singles performed per day $\frac{320}{10} = 32$.

Collection per year (323 days) in city service of 61 passenger capacity :—

On	(93.75 Miles) 150 Kms.	(131.25 miles) 210 Kms.	(168 Miles) 270 Kms.	(200 Miles) 320 Kms.
15%	115264 (59342)	161367 (68410)	207473 (72944)	245733 (76610)
125%	96053 "	134472 "	172894 "	20481 "
100%	76842 "	107578 "	138315 "	163899 "
90%	69157.8 "	96820 "	124484 "	147500 "
80%	61473.6 "	86062 "	110652 "	131111 "
70%	53789 "	75405 "	96821 "	114722 "
60%	46105 "	64547 "	82889 "	98334 "
50%	38421 "	53789 "	69158 "	81945 "

(Expenditure of the vehicle given in the brackets)

ANNEXURE A-8

**Running cost Working Sheet of a Spare Bus 55 Passenger Capacity
Making 270 Kilometers per day—323 days Working in a year.
87210 Kms. or 54156 miles per year.**

Cost of Chassis	Rs. 37,000·00
Cost of Body	Rs. 17,000·00
TOTAL COST	Rs. 54,000·00

Rs. 30,000 financed by hire purchase and 24000 invested by the Operator

1. Fixed Charges per 1 Year

(a) Depreciation at 20% per year on Rs. 49,445 (Rs. 54,000 total cost less one set of tyres cost Rs. 4,555 for 5 years for 1 year)	9,889·00	9,889·00
(b) Pay of drivers and conductors		Nil.
Taxation and Insurance		
(i) Tax under MMVT at Rs. 40 per scat for 55 seats for 1 year	8,800·00	
(ii) Tax under TPG Act at Rs. 25 per seat for 55 seats for 1 years	5,500·00	
(iii) Insurance (basic Rs. 415+1/2% on the value of the vehicle loss 10% for the first +Rs. 2·50 per passenger for risk less 20% for no claim amounting per year)	603·20	14,903·20
TOTAL		24,792·20
Deficit Interest per year		1,818·00
		26,610·20
Unexpected contingencies		2,000·00
		28,610·20
Average Resale of the vehicle		3,500·00

Variable Charges

	Rs.
(i) Cost of fuel per day for 270 Kms.at 4·5 Kms. per liter at 80 nP. per liter	48·00
(ii) Cost of engine oil per day on 270 Kms. at 3·20 Kms. per litre at Rs. 2·20 per litre	1·86
(iii) Cost of tyres per day on 270 Kms. at Rs. 5,911·75 per set of tyres for 48000 miles	20·65
(iv) Cost of servicing per day (on Rs. 1,236 for 323 days)	3·82
(v) Average cost of repairs per day on Rs. 8,300 per year on 323 days	25·70

(vi) Cost of stationery and postage	0.62
(vii) Bata for drivers	3.00
(viii) Bata for conductors	2.50
(ix) Bus stand fees and way-side expenses	1.75
	<hr/>
	107.70

Running Cost per mile when the
spare bus used on 323 days in a
years

$$25110.20 + (107.70 \times 323)$$

$$323 \times 270 \times 0.621$$

$$= \text{Rs. } 1.1$$



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ANNEXURE A-9

When spare bus used with 1 route bus running cost per mile	$1.38 + 1.1$	=Rs. 2.48
When spare bus used with 2 route buses running per mile	$1.38 + \frac{1.1}{2}$	=Rs. 1.93
When spare bus used with 3 route buses running cost per mile	$1.38 + \frac{1.1}{3}$	=Rs. 1.75
When spare bus used with 4 route buses running cost per mile	$1.38 + \frac{1.1}{4}$	=Rs. 1.66
When spare bus used with 5 route buses running cost per mile	$1.38 + \frac{1.1}{5}$	=Rs. 1.60
When spare bus used with 6 route buses running cost per mile	$1.38 + \frac{1.1}{6}$	=Rs. 1.58
When spare bus used with 7 route buses running cost per mile	$1.38 + \frac{1.1}{7}$	=Rs. 1.54
When spare bus used with 8 route buses running cost per mile	$1.38 + \frac{1.1}{8}$	=Rs. 1.52
When spare bus used with 9 route buses running cost per mile	$1.38 + \frac{1.1}{9}$	=Rs. 1.50
When spare bus used with 10 route buses running cost per mile	$1.38 + \frac{1.1}{10}$	=Rs. 1.49

ANNEXURE A-10

Garage and Workshop Facilities as a Department of Operational Cost of Stage Carriages.

Normally a vehicle will be stopped for 15 days for repair for the renewal of fitness certificate once in six months. The vehicles will be under repairs for 30 days in a year for the renewal of 2 fitness certificates. Allowing one day for breakdown in a month, total number of days the vehicle will be off road in a year due to breakdown will be 12 days. Thus the total number of days a vehicle will be off the road in a year will be about 42 days or the total number of days a vehicle can work in a year will be $(365-42)=323$ days.

A spare bus can also work for 323 days in a year. Hence a spare bus will be able to provide substitute service for eight route vehicles in a year $323/42=8$ vehicles. From this point of view in respect of each spare bus the minimum number of the fleet should be between 8 and 10 buses depending on workshop facilities. If a pucca modern workshop is there, the repair time can be cut down. The Running Cost per vehicle is worked out and given at Annexure 'A'. Running Cost per spare bus is worked out and given at Annexure 'B'. The cost of running a spare bus has to be added to the route has on this basis. The Running Cost per vehicle upto 10 is worked and given at Annexure 'C'.

The expenditure to maintain a consumer pump per month comes to about Rs. 1,200 (this includes interest on the capital investment, on the deposits for fuel, rent for the site, salary for the 3 attendants at Rs. 150 per month and salary for a Manager).

The rate of expenditure per day will be Rs. $1,200/30=Rs. 40/-$.

At present 2nP rebate is allowed for consumer per litre.

For making Rs. 40/- in sales, fuel 40/-02 litre or 2,000 litres have to consumed.

A vehicle making daily 320 Kilometers will consume 80 litres a day.

To consume 2,000 litres a day there should be 25 vehicles in the fleet.

Therefore, a fleet of 25 vehicles or more will be required for running a consumer pump without loss. Hence for purposes of viability on this alone, the strength must be 25. If the consumer pump is not there, there will have to be considerable dead mileage, loss of time, dislocation of work and additional drivers for fuelling the vehicles.

If an efficient and systematic service is to be operated it is essential that there should be a modern garage to attend to the servicing and running repairs of all vehicles. Without this facility, stage carriages doing considerable mileage every day cannot be operated without breakdown and serious dislocation in service. In addition to this garage, the service of a pucca workshop will be needed for major dockings, for obtaining fitness Certificates, and for major body repairs. This pucca workshop which is to be equipped with costly machineries has to be used fully if repair costs are to be cut down to the minimum. Of the total expenditure of Rs. 76,474 per year an amount of Rs. 33,315 goes towards fuel, cost of tyres, batteries and servicing and repair charges, constituting 43.7% of the total cost. Out of this 43.7%, 10.9% goes towards the repair charges alone. The life of the tyres, batteries and the fuel mileage will also depend on efficient maintenance. Also repairing the vehicle for fitness Certificate within the shortest time cannot be achieved unless a modern workshop is attached to the fleet. If this is done by outside agencies they will take their own time, thus increasing the cost of operation by necessitating maintenance of additional spare vehicles. The machineries required for a garage is given in Annexure A-11 and the additional machinery required for pucca repair shop is given in Annexure A-12. In order to ensure that there is adequate return on the capital invested on certain precision machines, it will be necessary to take certain outside jobs in respect of this precision work alone. This will also provide additional facilities in any area for executing similar work in taxis and other private cars by providing this facility which cannot be ordinarily provided by others. The total cost of the equipment, workshop building and ramp for servicing etc., will come to about Rs. 4 lakhs excluding the cost of the site. The site cost may be taken as Rs. 1 lakh. Only the minimum requirements in each shop has been provided. If the shop is to be fully utilised what should be the number of vehicles a fleet will have is to be decided.

It may be seen from the statement showing operational cost that an amount of Rs. 9,536 provided towards repair charges. Of this 1,236 is for servicing and Rs. 8,300 for repairs. In servicing 80% of the total amount goes towards labour and 20% cost of grease, oil etc. of the total repair charges the minor repairs and major repairs

will be in the proportion of 50:50 and in the former case the labour will be 60% and in the latter case about 40%. Summing up the above the following will be the position.

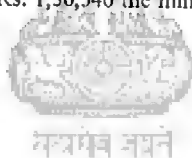
				Labour		Spares
				Rs.	Rs.	Rs.
Servicing	—	—	—	1,236	989 (80%)	247 (20%)
Minor Repairs	—	—	—	4,150	2,490 (60%)	1,660 (40%)
Major Repairs	—	—	—	4,150	1,660 (40%)	2,490 (60%)
				5,139 +		4,397
				=		9,536

In addition there will be a saving to the extent of about 5% in respect of fuel and tyre and battery charges which will come to Rs. 1,188. Thus there will be a reduction of Rs. 5,139 + Rs. 1,188 = Rs. 6,327 in the operational cost per year if a garage is maintained. The interest charges, depreciation on machinery and the running cost, operational cost of the workshop per year is given in Annexure A-13. The minimum out-turn should be at least Rs. 2,37,640 for the investment made. Therefore, based on the average expenditure of Rs. 6,327 for each vehicle, unless the total number of vehicle is 38 the workshop cannot be maintained. As this is the biggest number compared to others in respect of Spare Bus and consumer pump, this will be the decisive factor and the minimum strength of the fleet has to be decided on this basis.

The maximum strength will depend on the optimum capacity of the workshop and the staff. The staff and equipment provided will be able to attend on 5 vehicles at a time in the repairs section. A 10% fleet strength will normally be in the repair section. The fleet strength to which this repair organisation can cater will be about 50 vehicles.

If however a garage alone is maintained annual expenditure will be Rs. 1,36,540 as shown in Annexure A-14. Omitting major repairs which have to be done outside, labour charges will come to Rs. 6,327—Rs. 1,660 = Rs. 4,667 per vehicle per year.

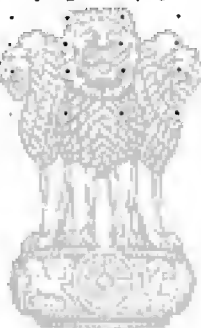
To incur an expenditure of Rs. 1,36,540 the minimum fleet strength must be about 30 vehicles.



ANNEXURE A-11

Machineries Required for Maintenance of a Garage.

	Rupees
1. Air Compressor (15 to 20 cubic feet capacity)	7,500·00
2. Car Washer	6,000·00
3. Lathe (6')	10,000·00
4. Battery charges and tester.	1,500·00
5. Double ended pedestal grinding machine	2,500·00
6. Portable drilling machine 1/4" and 1/2" capacity (1/4" /3 Nos; 1/2 1 No.)	1,500·00
7. Drilling machine (1" radial)	4,500·00
8. Brake riveting machine and brake shoe grinding machine.	1,500·00
9. Tools, gangs, pullers, Jacks etc.,	10,000·00
10. Black Smithy Section	2,000·00
11. Carpentry section	1,500·00
12. Upholstery section including tailoring machine	1,000·00
13. Tinker shop	1,000·00
14. Paint shop equipments	750·00
15. Electric welding set.	2,500·00
16. Gas Welding Set	750·00
17. Nozzle tester and calibrating equipment	15,000·00
18. Electrical testing machine such as plug tester, dynamo and starter tester	2,500·00
19. 10 ton hydraulic ramp	8,000·00
20. Automatic chassis Lubricator	3,500·00
TOTAL	83,500·00



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ANNEXURE A-12

Additional Equipment Required for Repairs in a Garage.

1. Reboring machine	12,000.00
2. Honing machine	8,000.00
3. Value refacer	7,500.00
4. Brake drum skimming machine	6,000.00
5. Crank shaft grinding machine	70,000.00
6. Hydraulic press	10,000.00
7. Shaping machine (24")	11,000.00
8. Bearing line boring machine	4,000.00
9. Connecting rod borer	2,000.00
11. Gudgeon pin lapping machine	1,500.00
11. Sheet metal and Body building machine	25,000.00
12. Surface grinder for special purposes	25,000.00
13. Surface plate (4' x 4')	1,500.00
14. Engine running in and testing bed for different types of vehicles	5,000.00
15. Metal spray equipment	5,000.00
	<hr/>
	1,93,500.00
Cost of machineries as per Annexure A-11	83,500.00
	<hr/>
Total Cost of machineries	2,77,000.00
	<hr/>



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ANNEXURE A-13

Labour

	Rs.
1. 3 mechanics at Rs. 6 per day per year	6,480.00
2. 3 assistants at Rs. 4 per day per year	4,320.00
3. 2 Fitters at Rs. 5 per day per year	3,600.00
4. 2 Assistants Fitters at Rs. 4 per day per years	2,880.00
5. 1 Turner at Rs. 6 per day per year	2,160.00
6. 1 Asst. Turner at Rs. 4 per day per year	1,440.00
7. 1 Blacksmith at Rs. 5 per day per year.	1,800.00
8. 1 Hammer-man at Rs. 4 per day per year	1,440.00
9. 1 Asst. Blacksmith at Rs. 4 per day per year	1,440.00
10. 1 Carpenter at Rs. 5 per day per year	1,800.00
11. 1 Asst. Carpenter at Rs. 4 per day per year	1,440.00
12. 2 Electrician at Rs. 6 per day per year	4,320.00
13. 2 Asst. Electrician at Rs. 4 per day per year	2,880.00
14. 1 Liner at Rs. 5 per day per year	1,800.00
15. 1 Welder at Rs. 5 per day per year	1,800.00
16. 1 painter at Rs. 5 per day per year	1,800.00
17. 1 Assistant to Painter	1,440.00
18. Pay of one Foreman at Rs. 300/-	3,600.00
19. Pay of one Engineer at Rs. 600/-	7,200.00
20. Store-Keeper, Clerk, and time-keeper (3 x 200)	7,200.00
21. Water and Electric Charges	5,000.00
22. Contingencies at Rs. 500 a month	6,000.00
TOTAL	71,840.00

Additional labour for special machines.

	Rs.	Rs.
3 mechanists at Rs. 400 per month	14,400	
2 sheet metal machines at Rs. 250 p.m.	6,000	
1 Engine Tester at Rs. 300 per month	3,600	
1 Calibrator Rs. 300 a month	3,600	
4 Assistants at Rs. 100 per month	4,800	
		32,400.00
		1,04,240.00
1. Interest on capital at Rs. 5,00,000 at 15% per year		75,000.00
2. Depreciation in building at 2% (building 1 lakh)		2,000.00
3. Depreciation on machineries at 10%		27,700.00
4. Maintenance of building at 1%		1,000.00
5. Maintenance of machineries at 10%		27,700.00
6. Labour charges and other expenses		71,840.00
7. Additional labour for special machines		32,400.00
GRAND TOTAL		2,37,640.00

If garage alone is maintained capital is about **3,00,000.00**

ANNEXURE A-14

	Rs.
1. Interest on capital at Rs. 3,00,000 at 15% per year	45,000.00
2. Depreciation in building at 2% (building 1 lakh)	2,000.00
3. Depreciation on machineries at 10%	8,350.00
4. Maintenance of building at 10%	1,000.00
5. Maintenance of machineries at 10%	8,350.00
6. Labour Charges and other expenses	71,840.00
TOTAL	<u>1,36,540.00</u>



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ANNEXURE B

Running cost working sheet in respect of goods Vehicles (Benz, Fargo or Bedford) doing 270 Kilometers a day Assuming the Vehicle runs for 323 days in a years (Vehicle runs 87210 Kilometers or 54156 miles in a year).

Cost of Chasis	Rs.	37,000.00
Cost of Body	Rs.	4,500.00
TOTAL COST	Rs.	41,500.00

Fixed Charges for 1 Year

(a) Depreciation cost of vehicles for 1 year (Rs. 41500 —Rs. 4,555 Cost of one set of tyres	Rs.	7,389.00
(b) Pay of 2 drivers at Rs. 118 per month for 1 year	Rs.	2,832.00
Pay of 2 cleaners at Rs. 91 per month for 1 year	Rs.	2,184.00
	Rs.	12,405.00
		19.23%
(c) Tax under MMVT at Rs. 800 per quarter per year	Rs.	3,200.00
Tax under TPG Act at Rs. 37.50 per month	Rs.	450.00
Insurance at Rs. 270 basic + 1/2% on the value of the vehicle plus Rs. 12.50 for each driver and cleaner + Rs. 50 per ton of load risk taking total 12 tons	Rs.	1,095.00
	Rs.	4,745.00
		7.35%
(d) Cost of fuel at 3.75 Kms per litre on 87210 KMs. Rs. 0.80 per litre	Rs.	18,604.00
Cost of engine oil at one litre for 320 Kms. on 87120 Kms. at Rs. 2.20 per litre	Rs.	599.60
	Rs.	19,204.40
		29.80%

Rs.

Cost of tyres on e set 6
nos. Rs. 4,555.75 retread-
ing charges Rs. 693 per 6
tyres. New tyres 25000
miles first retread, 15000
miles and 2nd retread
10000 miles total 50000
miles. Cost of tyres, Rs.
4555+693 . . .

5,941.75

On the balance of 4157
miles cost of tyres.

5941.75 × 4157/50000 . . . 494.00

Rs. 6,435.75 10.00%

Cost of batteries at Rs.
242/- each . . .

774.40

774.40 0.75%

(e) Servicing 24 ordinary at
Rs. 14 and 24 lubricating
services at Rs. 37.50 . . .

1,236.00

Average repair charges
on the Rs. 3,500 first year,
6000 2nd Year, Rs.
12,000 on the 3rd year,
Rs. 10,000 on the 4th
year and Rs. 10,000 on
the 5th year . . .

8,300.00

Rs. 9,536.00 14.79%

Over-Head Charges

Office and garage rent
at Rs. 150 . . .

1,800.00

Management and staff
etc. Rs. 250 . . .

3,000.00

Stationery and postage . . .

15.00

Bata for drivers at Rs.
3 per day . . .

969.00

Stand fees and way-side
expenses at Rs. 2 per
day . . .

646.00

Leave and off duty salary
at 20% of Rs. 5,016/- . . .

1,003.00

Bhata for conductors at
Rs. 2 per day . . .

646.00

Provident Fund contribu-
tion at 6-1/4% of the
pay of drivers and
cleaners . . .

313.50

Commission for agents at
Rs. 10/- per day . . .

3,230.00

GRAND TOTAL . . .

Rs. 11,622.70 18.02%
Rs. 64,722.85

	Rs.		Rs.
Interest 12% on the invested vested capital on Rs. 16,500 for 1 year.	1,980.00	Interest on Depreciation reserve at 20%.	
Interest for 5 years	9,900.00	On 1st year's depreciation Rs. 8300 interest at 12% for 4 years	3,984
Interest on borrowed capital of Rs. 25,000 for 2 years at 12% plus 1% finance commission plus Rs. 150 for contingencies	6,945.00	On the 2nd years' depreciation Rs. 8,300 interest @ 12% for 3 years	2,988
		On the 3rd year's depreciation Rs. 8,300 interest @ 12% for 2 years	1,992
		On the 4th year's depreciation Rs. 8,300 interest @ 12% for 1 year	996
Total interest payable	<u>16,845.00</u>		<u>9,960</u>
Interest available on depreciation amount	9,960		
Deficit interest for 5 years Rs. 16,845.00—9,960.00 =	6,885.00		
Average deficit interest per year	6,885		
Rs. $\frac{6,885}{5}$ =	1,377.00		
Total Running Cost after adding deficit interest : Rs. 64,722.85 + Rs. 1,377.00	66,099.85		
Actual resale value of the vehicle at the end of 5th year . .	15,000		
Average on resale value per year	15,000		
Rs. $\frac{15,000}{5}$ =	3,000.00		
Total Running Cost after deducting resale value	<u>66,099.85</u> <u>3,000.00</u>		
	63,099.85		
Running Cost per mile			
$\frac{63,099.85}{54,156}$ =	1.165		

If 7 years depreciation is adopted, the difference average cost of depreciation and resale value are likely to cancel out each other. If the resale value is same which is highly unlikely the cost would be less by 2.7 paise per mile.

ANNEXURE B-1

Interest on Capital in respect of goods Vehicles fully Financed by the Operator and Partly Financed by the Operator and Partly by hire-Purchase.

(a) Own investment of Rs. 41,500.

Interest at 12% for
 $41500 \times 12 \times 5$
100

= 24,900.00

Depreciation reserve at 20%
per annum on the capital
and interest thereon.

On the 1st year's deprecia-
tion Rs. 8,300 interest at
12% for 4 years . . . 3,984.00

On the 2nd year's deprecia-
tion Rs. 8,300 interest at
12% for 3 years . . . 2,988.00

On the 3rd year's deprecia-
tion Rs. 8,300 interest at
12% for 2 years . . . 1,992.00

On the 4th year's deprecia-
tion Rs. 8,300 interest at
12% for 1 year . . . 996.00

Rs. 24,900.00

Rs. 9,960.00

Deficit interest for 5 years : Rs. 24,900.00—Rs. 9,960.00 =14,940.00
(—) (+) (—)

(b) On own investment of Rs. 16,500.

Interest for Rs. 16,500 for
5 years at 12% =
 $16,500 \times 12 \times 5$
100

=9,900.00

Depreciation reserve at 20%
per annum on the capital
and interest thereon.

On borrowed amount

Rs. 25,000.

On the 1st year's deprecia-
tion Rs. 3,300 interest @
12% for 4 years . . . 1,584.00

Interest on the borrowed
amount at 12% plus
1% finance commission
and Rs. 150 for contin-
gency charges

6,945.00

On the 2nd year's deprecia-
tion Rs. 3,300 interest @
12% for 3 years . . . 1,188.00

On the 3rd year's deprecia-
tion Rs. 3,300 interest @
12% for 2 years . . . 792.00

On the 4th year's deprecia-
tion Rs. 3,300 interest 12%
for 1 year . . . 396.00

Rs. 16,845.00

Rs. 3,960.00

Depreciation reserve at 20% per annum on the capital and interest thereon	
1st year's depreciation Rs. 5,000 interest at 12% for 4 years	2,400·00
2nd year's depreciation Rs. 5,000 interest @ 12% for 3 years	1,800·00
3rd year's depreciation Rs. 5,000 interest @ 12% for 2 years	1,200·00
4th year's depreciation Rs. 5,000 interest @ 12% for 1 year.	600·00
TOTAL	6,000·00
	9,960·00

Deficit interest for 5 years : Rs. 16,845·00—Rs. 9,960·00=6,885·00
(—) (+) (—)

Goods Vehicles on Own Investment of Rs. 41,500 in 3 years

(c) Interest @ 12% for 3 years.	On the 1st year's depreciation (33 1/3%) Rs. 13,833 1/3 interest at 12% for 2 years	3,320·00
$\frac{41800 \times 12 \times 3}{100}$	= Rs. 14,940·00	
	On 2nd year's depreciation (33 1/3%) Rs. 13,833 1/3 interest at 12% for 1 year	1,660·00
	Rs. 14,940·00	Rs. 4,980·00

Deficit interest :

Rs. 14,940·00—Rs. 4,980·00= Rs. 9,960·00
(+) (—)

(d) In 4 years.

Interest at 12% for 4 years.

$\frac{41500 \times 12 \times 4}{100}$ = Rs. 19,920·00

Depreciation reserve at 25% per annum on the capital and interest thereon.

On the 1st year's depreciation Rs. 10,375 interest @ 12% for 3 years	3,735·00
On the 2nd year's depreciation Rs. 10,375 interest at 12% for 2 years	2,490·00
On the 3rd year's depreciation Rs. 10,375 interest @ 12% for 1 year	1,245·00
Rs. 19,920·00	Rs. 7,470·00

Deficit interest :

Rs. 19,920·00—Rs. 7,470·00 = Rs. 12,450·00
(+) (—)

(e) In 5 years

Interest for 5 years :

 $\frac{41500 \times 12 \times 5}{100}$

Rs. 24,900·00

Depreciation at 20% per annum.

On 1st year's depreciation
Rs. 8,300 interest at 12%
for 4 years 3,984·00On 2nd year's depreciation
Rs. 8,300 interest at 12%
for 3 years 2,988·00On 3rd year's depreciation
Rs. 8,300 interest at 12%
for 2 years 1,992·00On 4th year's depreciation
Rs. 8,300 interest at 12%
for 1 year 996·00

Rs. 24,900·00

Rs. 9,960·00

Deficit interest ; Rs. 24,900·00—Rs. 9,960·00—Rs. 14,940·00

(—) (—) (—)

(f) In 6 years.

Interest for 6 years at
12%. $\frac{41500 \times 12 \times 6}{100}$

Rs. 29,880·00

Depreciation at 16 2/3%
per annum.On 1st year's depreciation
Rs. 6,916 2/3 interest @
12% for 5 years 4,150·00On 2nd year's depreciation
Rs. 6,916 2/3 interest @
12% for 4 years 3,320·00On 3rd year's depreciation
Rs. 6,916 2/3 interest @
12% for 3 years 2,490·00On 4th year's depreciation
Rs. 6,916 2/3 interest at
12% for 2 years 1,660·00On 5th year's depreciation
Rs. 6,916 2/3 interest @
12% for 1 year 830·00

Rs. 29,880·00

Rs. 12,450·00

Deficit Interest : Rs. 29,880·00—Rs. 12,450·00—Rs. 17,430·00

(—) (+) (—)

(g) In 7 years.

Depreciation at 14 2/7% per
annum.Interest for 7 years at
12%. $\frac{41500 \times 12 \times 7}{100}$

Rs. 34,860·00

On 1st year's depreciation	
Rs. 5,928 4/7 interest at	
12% for 6 years . . .	4,268 4/7
On 2nd year's depreciation	
Rs. 5,928 4/7 interest at	
12% for 5 years . . .	3,557 1/7
On 3rd year's depreciation	
Rs. 5,928 4/7 interest at	
12% for 4 years . . .	2,845 5/7
On 4th year's depreciation	
Rs. 5,928 4/7 interest at	
12% for 3 years . . .	2,134 2/7
On 5th year's depreciation	
Rs. 5,928 4/7 interest at	
12% for 2 years . . .	1,422 6/7
On 6th year's depreciation	
Rs. 5,988 4/7 interest at	
12% for 1 year . . .	711 3/7
<u>Rs. 34,860·00</u>	<u>Rs. 14,940·00</u>

Deficit interest : Rs. 34,860·00—Rs. 14,940·00 × Rs. 19,920·00

(—) (+) (—)



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ANNEXURE B-2

Income per year for goods Vehicles at different daily mileages

Rate per mile	Daily Miles Done			
	270 Kms.	320 Kms.	400 Kms.	480 Kms.
	Rs.	Rs.	Rs.	Rs.
75 Ps./Mile	4,0617	48,139	60,175	72,210
87·5 Ps./Mile	47,386	56,163	70,204	84,245
100 Ps./Mile	54,156	46,186	80,233	96,280
110 Ps./Mile	59,572	70,605	88,256	1,05,908
115 Ps./Mile	62,279	73,814	92,268	1,10,722
125 Ps./Mile	67,695	80,233	1,00,291	1,20,350
135 Ps./Mile	73,111	86,651	1,08,335	1,29,978
150 Ps./Mile	81,234	96,279	1,20,350	1,44,420
175 Ps./Mile	94,773	1,12,326	1,40,408	1,68,490
200 Ps./Mile	1,08,312	1,28,372	1,60,466	1,92,560

	50 Kms.	100 Kms.	150 Kms.	200 Kms.
100	10,029	20,058	30,057	40,078
110	11,032	22,064	33,096	44,128
115	11,534	23,068	34,602	46,136
125	12,539	25,078	37,617	50,156
135	13,539	27,078	40,617	54,156
150	15,043	30,086	45,129	60,172
175	17,551	35,102	52,653	70,240
200	20,058	40,116	60,174	80,232

ANNEXURE B-3 DATED 14-6-66

Workshop facilities as a determinant of Lorry operation

If a systematic and regular lorry service is to be operated there should be a modern garage to attend to the servicing, minor and running repairs of lorries. Without this facility a lorry doing considerable mileage everyday cannot be operated without breakdowns and serious dislocation in service. The breakdowns in a lorry has a more serious effect on the owner than in the case of buses as the customers loose confidence in him and will not entrust goods worth thousands of rupees to his care. Also, for obtaining Fitness Certificates if a lorry owner completely depends on outside facilities only, he will loose considerable time. At the time of getting Fitness Certificate, the garage and staff will be found very useful in getting the specialised jobs done by the outside agencies and the fitting work done in the garage. The life of the tyres, battery and fuel mileage will also depend on efficient maintenance. Hence a garage with minimum staff is essential. However, in the case of lorries it is not contemplated that there should be a pucca modern workshop to carry out all major repairs as in the case of buses, as such a workshop will require equal if not greater attention compared to the operation of the lorry service itself and will also its ancillary character. The total cost of equipment and recurring charges are given separately.

It may be seen from the statement showing operational cost that an amount of Rs. 9,536 is provided towards the repair charges. Of this 1,236 is for servicing and rest Rs. 8,300 for repairs. In servicing 80% of the total amount goes towards labour and 20% cost of grease, oil etc. Of the total repair charges the minor repairs and major repairs will be in the proportion of 50 : 50 and in the former case the labour will be 60% and in the later case about 40%. Summing up the above will mean :—

		Labour	Spares
	Rs.	Rs.	Rs.
Servicing	1,236	989 (80%)	247 (20%)
Minor Repairs	4,150	2,490 (60%)	1,660 (40%)
Major Repairs	4,150	1,600 (40%)	2,490 (60%)
		5,139	4,397
		=Rs. 9,536	

In addition there will be savings to the extent of about 5% which will come to Rs. 1,270 (950+320) in respect of fuel and tyre charges. Thus there will be a reduction of Rs. 5,139+Rs. 1,270=Rs. 6,409 in the operational cost per year if a garage is maintained.

A statement showing the minimum equipment and staff needed for a garage is given in Annexure 'B-4'.

To obtain full utilisation of the staff and the equipment in the garage, it will be necessary to have two vehicles in the garage at a time. Normally there will be about two vehicles in the workshop for servicing, running repairs and maintenance and renewal of Fitness Certificates if there are 10 vehicles in operation.

The figure 10 has another significance. It may be seen from the drivers' utilisation statement that full utilisation of driver is reached when the strength of the vehicles is 5 or multiples of 5.

Hence 10 vehicles fleet will be the most economical one when a garage is maintained.

It may be seen that the expenditure on garage will come to Rs. 2,262 per vehicle. It has also been shown that in respect of each vehicle individually operated, the total expenditure on labour will be to the order of Rs. 6,409 per vehicle. Hence by having a garage for the maintenance of a fleet of 10 vehicles the difference in operational cost per vehicle will come to Rs. 6,409—Rs. 2,262 or Rs. 4,147. This works out to 7.7 paise per mile. It may also be seen that if the fleet strength is 5 the maintenance cost of the garage per vehicle will be about Rs. 4,500. It may be seen that the cost of the maintenance of garage will be equal to the labour charges that will be paid in respect of 3 to 4 lorries, if the work is entrusted to outside workshops. Above this number for every additional lorry there will be a gradual increase in the reduction of the running cost up to 10 vehicles. The details are given in Annexure 'B-6'.

Hence 10 will be the most suitable number for the formation of 'VIABLE UNIT' in respect of Lorries.

ANNEXURE B-4 DATED 14-6-66

Minimum equipment needed for a garage for servicing and carrying out minor repairs to lorries :—

	Rs.
1. Air Compressor 50×120 cubic capacity	7,500
2. Battery charges and tester	1,500
3. Pedestal grinding machine and portable drill	4,000
4. Hand tools for smithy shop, tinkers shop and carpentary shop	3,000
5. Lubrication equipment, air operator ordinary type lubricator	3,500
6. Tools, gauges, pullers, roller, jack etc.	5,000
	<u>24,500</u>

Recurring Expenditure per Annum

Labour Charges

	Rs.
One mechanic at Rs. 250 per month	3,000
One fitter at Rs. 150 per month	1,800
One black-smith at Rs. 150 per month	1,800
One assistant electrician at Rs. 120 per month	1,440
One Cleaner at Rs. 90 per month	1,080
One tyre fitter at Rs. 120 per month	1,440
TOTAL	<u>10,560</u>

Electricity and water charges at Rs. 250 per month	3,000
Contingencies including rent for building at Rs. 500 a month	6,000
	<u>9,000</u>
Total Expenditure : (Rs. 10,560+9,000)	19,560
Depreciation amount (Rs. 24,500/8)	3,060
TOTAL	<u>22,620</u>

In a fleet of 10 vehicles expenditure per vehicle is : (Rs. 22,620/10) 2,262

ANNEXURE B-5 DATED 14-6-66

Cost of maintaining a force with staff as per details

Fleet Strength	Savings in Labour	Net savings	Savings per vehicle	Savings per running mile in NP.	Remarks
	Rs.	Rs.	Rs.		
1.		
2. —		—	—	—	
3. —		—	—	—	
4. 6409 × 4 = 25,636		3,016	754	1.4	
5. 6409 × 5 = 32,045		9,425	1,885	3.5	
6. 6409 × 6 = 38,454		15,834	2,636	4.9	
7. 6409 × 7 = 44,863		22,243	3,178	5.9	
8. 6409 × 8 = 51,272		28,652	3,582	6.6	
9. 6409 × 9 = 57,681		35,061	3,885	7.2	
10. 6409 × 10 = 64,090		41,470	4,147	7.7	



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ANNEXURE B-6 DATED 14-6-66

No. of vehicles in the unit	Running cost per mile in rupees	Reduction in over-head charges in NP.	Reduction in Pulling of drivers in NP.	Reduction due to maintenance garage in NP.	Total reductions	Net running cost per mile rupees
1.	1.165	Nil	Nil	Nil	Nil	1.165
2.	1.165	4.4	2.9	Nil	7.3	1.092
3.	1.165	5.9	1.9	Nil	7.8	1.067
4.	1.165	6.6	2.9	1.4	10.9	1.056
5.	1.165	7.1	3.5	3.5	14.1	1.024
6.	1.165	5.9	2.9	4.9	13.7	1.028
7.	1.165	6.5	2.6	5.9	15.0	1.015
8.	1.165	6.6	2.9	6.6	16.1	1.004
9.	1.165	6.8	2.6	7.2	16.6	0.999
10.	1.165	7.1	3.5	7.7	18.3	0.982



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